

PROFITS OF THE NATIONAL BANKS

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PREFACE

THE great industrial era in the development of the United States was ushered in with the turning of the twentieth century. Tendencies then developing have gained momentum with the passing years and come to climatic focus particularly in the last decade. Through the media of mergers, consolidations and absorptions the integration of industry, unification of transportation systems and the linking of mercantile establishments serving widely scattered and varying markets have been achieved. The giants of business thus created have at once established the mode for and pioneered the way through the intricacies and hazards of the new economic order.

In the process of change forces have been placed in motion which are destined to bring about in the financial world modifications which are the counterpart of the recently acquired characteristics of industry. Growing business units of whatever size can best be served by comparably large and extensive banking facilities. Traditionally conservative by temperament and further constrained by tardy legislative enactments at the hands of state and national lawmaking bodies, the bankers of the United States have only in recent years embarked upon a program for the development of banking institutions designed to meet and anticipate every financial need of their clientele.

Meanwhile, industry, commerce and trade have moved forward with dramatic rapidity. Corporations,

already large in themselves, have become associated with other business organizations manufacturing and distributing products in cognate fields. In this manner diversification has been accomplished. Diversification, together with magnitude, have made possible a degree of independence which has rendered unnecessary the services of many functionaries formerly employed. Accordingly the current practice of maintaining sufficient cash reserves to meet peak short time requirements has, on the one hand, seriously threatened one of the principal outlets for loanable bank funds. On the other hand, the profitable use of these reserves in the money market when not immediately demanded by their owners has opened up a substantial source of competition for the banks.

Furthermore, financial and investment organizations of numerous types, enjoying flexibility because they have not as yet seriously felt the tempering hand of public supervision, have sprung up almost literally overnight to meet demands as quickly arisen in the wake of installment buying and the hand-to-mouth habit of present day living and doing business. Each of these companies to a degree encroaches directly or indirectly upon the field of operations which the banker has long been accustomed to consider his own.

The purpose of this monograph is to describe the manner in which the National Banks have found their way to profits through the complex network of changing economic conditions and competitive forces which have beset them. To this end, the long-time trends in

the operations of the National Banks, as reflected in their receipts, expenditures and earnings, are presented and interpreted. Special emphasis is placed upon the experiences of the last ten years, during which time the evidences of adjustment are seen most clearly.

No attempt is made to analyze the end-results of the presence or absence of profitable operation as indicated by dividend payments, market prices of bank stocks, failures and suspensions. No more than passing note is taken of the changes in the character of bank deposits, nor of the transition in the policy of banks as to the utilization of their funds. These phases of the subject, as well as those involving comparisons between the profits of the banks and various industrial groups, on the one hand, and on the other hand, between the differential profits of financial institutions when classified according to structural, functional and geographical criteria, would logically be included in the sequel to this monograph.

Personal acknowledgment is made of special indebtedness to Mr. David Friday, who stimulated the writer to enter this field of study, placed helpful materials at his disposal and made many valuable suggestions in the course of the work. Of his indebtedness to Professor George E. Barnett, who suggested the precise scope of the work, and to Professor Jacob H. Hollander of The Johns Hopkins University, he wishes to make grateful acknowledgment.

K. P.

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Profits of the National Banks

CHAPTER I

Introduction

IN his memorable report of December 13, 1790, to the first Congress, Alexander Hamilton said: "And thus, by contributing to enlarge the mass of industrious and commercial enterprise, banks become nurseries of national wealth—a consequence as satisfactorily verified by experience as it is clearly deducible in theory."¹

For many years banking orthodoxy in the United States was judged, at least theoretically, by the criteria established in England in the eighteenth century when the prime function of the banks was to meet the needs of commerce. Adam Smith, defining the functions which banks may properly perform, laid down the principle that

What a bank can with propriety advance to a merchant or undertaker of any kind, is not either the whole capital with which he trades, or even any considerable part of the capital; but that part of it only, which he would otherwise be obliged to keep by him unemployed, and in ready money for answering occasional demands. * * * The bank, however, in dealing with such customers, ought to observe with great attention, whether in the course of some short period (of four, five, six, or eight months, for example) the sum of the repayments which it commonly receives from them, is, or is not, fully equal to that of

¹ The Debates and Proceedings in the Congress of the United States; 1st Cong., 1st sess., Appendix 2086.

the advances which it commonly makes to them. If, within the course of such short periods, the sum of the repayments from certain customers is, upon most occasions, fully equal to that of the advances, it may safely continue to deal with such customers.²

Since the Civil War our banking organism has undergone a continuous process of deviation from commercial banking tradition, thus articulated, and of adaptation to the peculiar and variable requirements of a country whose economic energies have been devoted more largely to its industrial than to its commercial development.³

In the period since the establishment of the Federal Reserve system the results of this process have been particularly striking. Changes in the character of operating accounts indicate the nature of the developments which are taking place. The external symptoms of the transition are seen in the background of many concurrent phenomena. Particularly in the post-war era, an unprecedented enhancement in the market value of bank stocks has been accompanied by an equally impressive and perhaps more instructive array of bank failures and suspensions. In harmony with the tendencies of the clientele which they serve, banks are becoming fewer in number and larger in size.⁴ Finance functions are being undertaken by an increasingly large and

² *Wealth of Nations*, Harvard Classics Edition, 254, 255; referred to by Waldo F. Mitchell, *The Uses of Bank Funds*, 3, 4.

³ For changes in the theory and practice of banks in the use of their funds, see Mitchell, *op. cit.*, 1-18, 186.

⁴ Gurden Edwards, "Banks Decreasing in Number But Increasing in Size", in *The Annalist*, January 7, 1927, 3, 4; and Edwards, "Why Our Banks Are Becoming Fewer but Larger", in *ibid.*, January 28, 1927, 165 ff.

varied number of specialty organizations. At the same time commercial banks, with their concentration of manifold banking and cognate services under one roof, are assuming the role of department stores of finance.

The primary *raison d'être* of banks, as well as of business organizations in general, is to satisfy specific economic wants. Unless it is profitable to do so neither enterprisers nor capital will ordinarily present themselves for this purpose. Since the passage of the National Bank Act in 1863, national bank associations formed in accordance with its provisions have constituted the backbone of our banking structure. That these "nurseries of national wealth" have been, on the whole, profitable undertakings is demonstrated by their persistent growth. Will a continuance of the present tendencies in national banking operate to make them more or less so in the future?

In our search for the answer to this question it will be necessary to observe the direction in which the banks are moving and then to determine whether or not the changes taking place will operate to increase or to decrease their net profits. To this end our attention will be first directed to those trends in the operating and capital accounts of the banks which appear to have continuity and to be significant in character. It is clearly not within the scope of the present inquiry to take more than passing cognizance of fluctuations, cyclical in nature, which reflect merely temporary oscillations. Then, by comparing the data for banks operating under widely varying conditions, the circumstances conducive

to the most favorable results may be isolated and conclusions drawn as to the probable effects of the present trends.

The basic body of data for this analysis is found in the annual reports of the Comptroller of the Currency. At the present time there are available sixty-four of these reports, covering the period from 1863 through 1926. Beginning with the year 1873, the Comptroller has included in his reports statistical information on other than national banks. Since the inception of the Federal Reserve system, the Federal Reserve Board has published annual reports, the first one being for the period ending December 31, 1914. In addition, the Board has issued monthly bulletins dating from May 1, 1915. Of lesser importance for the present purpose are the bulletins of the Federal Reserve Banks and the annual reports of the state banking commissioners.

Inquiries designed to clarify our understanding of the extent and fluctuations of profits encounter many serious obstacles. Perhaps this is attested by the relative paucity of studies having such a purpose in view. Not only are business organizations reluctant to give information which will make public their earnings, but such information when obtained is frequently little better than useless because the absence of uniformity in the classification of accounts has destroyed its comparability. Where a business is supervised by public agencies requiring uniform periodical reports, as in the case of the banks, these handicaps are to a large extent removed.⁵ Bank data, by reason of the nature of the

⁵ Wesley C. Mitchell, *Business Cycles*, 1911 Edition, 422.

business, have a further virtue in their practical immunity from the whole gamut of difficulties which cluster around the problem of depreciation.

The profitableness of a business organization is usually expressed in an absolute amount or as a ratio to the invested capital or the volume of business done. Ratios have the advantage of facilitating comparisons by eliminating the element of change in either one of these base figures. While the capital investment of a bank includes its paid-in capital stock, surplus and undivided profits, the ratios to invested capital used in this study are computed on a base figure which does not include undivided profits. The use of capital and surplus as representative of the investment in the national banks is consistent with the practice of the Comptroller of the Currency. The value of capital ratios is not materially impaired for a study of the long-time trends by this omission because balances in the undivided profits account are ultimately absorbed into the surplus account.

For comparing the operating efficiency of different banks, however, the more significant ratio base is earning assets, or the total of loans, discounts and investments. Earning assets includes practically all funds which are used by the banks for income producing purposes and is the item which most nearly measures the total volume of business done. The principal weakness of the ratio of earnings to invested capital as a measure of operating effectiveness lies in the fact that it tells nothing as to the rate of capital turnover, which

is one of the most important elements in profit determination. A high percentage return on the investment may be due to a wide margin of profit on a comparatively small number of units, or to a narrow unit profit taken on many units, or to many other possible operating combinations, no one of which is specifically indicated by the ratio. It is possible, in other words, for a bank or group of banks under especially promising conditions to show a favorable return on their investment even though they may be ever so poorly managed. It is much more difficult, however, for an incompetent management under the same conditions to show a high earnings ratio to its loans and investments. Almost invariably those banks which have demonstrated consistently the capacity to make a fair profit on the volume of business done have been found to be ably managed and as a result profitable undertakings for their owners. Accordingly much more importance will be attached in this study to the earning assets than to the capital ratios.

Since the loans and investments of banks fluctuate not only between the dates upon which condition reports are submitted, but from day to day it is impossible to compute with absolute accuracy an average annual figure for the earning assets of the national banks. In this study, unless otherwise stated, the ratios are based upon the report at the end of the fiscal year which is made about the 30th of June in each year. Although greater inaccuracies are introduced than would be the case were the data for the five reports in each year

averaged, they are not considered significant in view of the fact that the emphasis is throughout on the long time trends rather than the short swings.⁶

⁶ Earning assets reported on June 30, 1926, were \$19,492,387,000. The Average of earning assets reported during the year was \$19,625,542,000, or \$133,145,000 more than the June report. The error introduced for this particular year is approximately one-fifteenth of one per cent. See Annual Report of the Comptroller of the Currency, 1926, 19.

CHAPTER II

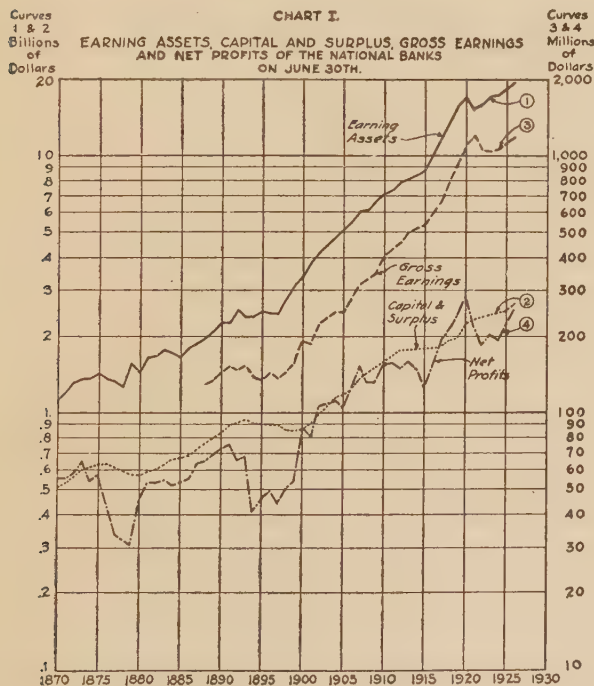
The Major Trends in National Banking

A GENERAL survey of the growth and earnings of all national banks in the United States in the fifty-seven years since 1870 is provided by Chart I. It is apparent that gross earnings and earning assets have increased at approximately the same rate, while net profits and capital and surplus also have about the same rate of growth, which is considerably less rapid than in the case of the former two items. The rate of gross return on the total volume of assets used for earning purposes and the rate at which net profits have been earned on the invested capital have remained relatively constant.

The net profits curve indicates a marked sensitiveness to cyclical movements. Bank profits were especially hard hit by the crises of 1873, 1893 and 1920. Of less amplitude and shorter duration were the recessions subsequent to the disturbances of 1884, 1900, 1904, 1907 and 1914. With some lag, as would be expected, capital investment ebbs and flows with the tide of profits. Earning assets and gross earnings evidence only slight response to changes in general business conditions as they continue their practically uninterrupted advance year in and year out.

Chart II shows that while losses have increased at a rate only slightly greater than that for invested capital,

total expenses have mounted faster than any other factor. The smooth character of the latter curve indicates that it is not possible for the banks to adjust their operating expenses to temporary changes in the volume of



Data: See Appendix, Table 1, page 94

Gross earnings include income from all sources before any deductions are made. This item is not reported by the Comptroller prior to 1888. In agreement with his method of report-

ing, gross earnings here used include recoveries on charged off assets for the years from 1888 to 1917, inclusive. Beginning with 1918 gross earnings do not include recoveries. Being too small an item to impair the essential comparability of the data through this inconsistency in usage, the added convenience of using the data as reported is deemed, for the present study, to be of more importance than the preservation of absolute accuracy. Gross earnings, recoveries on charged off assets and gross earnings plus recoveries for the period from 1918 to 1926 appear below. Gross earnings plus recoveries shown below are comparable with the gross earnings reported for previous years.

(In thousands of dollars)

Year.	Gross Earnings.	Recoveries.	Gross Earnings Plus Recoveries.
1918.	797,890	16,107	813,977
1919.	910,760	21,066	931,826
1920.	1,109,116	23,912	1,133,028
1921.	1,201,919	23,978	1,225,897
1922.	1,067,268	41,782	1,109,050
1923.	1,049,408	51,000	1,100,508
1924.	1,074,559	34,495	1,109,054
1925.	1,124,097	39,686	1,163,783
1926.	1,192,218	44,005	1,236,223
1927.	1,243,043	33,339	1,276,382

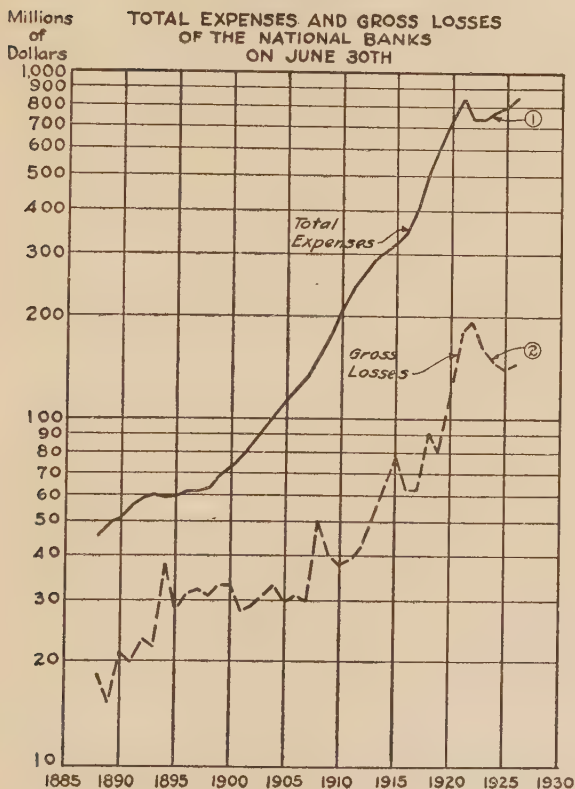
Throughout this study when gross earnings are used in time series going back of 1917, the practice here outlined is followed.

Net Profits is synonymous with "Net addition to profits" as used by the Comptroller and the Federal Reserve Board. For the years prior to and including 1917 it is computed by subtracting total expenses and gross losses from gross earnings, which as noted above included recoveries on charged off assets. After that year the computation is made by subtracting total expenses and net losses from gross earnings.

Earning assets is the total of loans, discounts and investments.

Source: Gross earnings, net profits and capital and surplus are taken from the annual reports of the Comptroller for the years indicated. Earning assets from 1870-1913 are taken from *ibid*, 1914, II, 220 ff.; from 1914-26, *ibid*, 1926, 268 ff.

CHART II



Data: See Appendix, Table 2, page 96.

Total Expenses includes all bank expenses.

Gross Losses includes losses sustained on premiums on bonds, bad debts, decreases in values and all other losses charged off. Prior to 1917 recoveries on charged off assets were included with gross earnings. Thereafter recoveries were reported as a separate item making it possible to compute net losses.

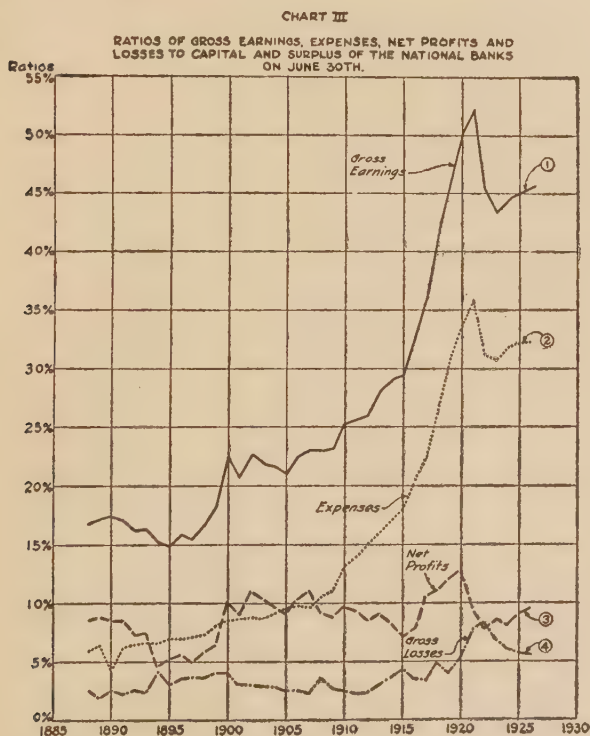
Source: Annual reports of the Comptroller of the Currency for the years indicated.

business. In marked contrast is the curve for losses. Every business disturbance, however slight, takes its toll in bank losses.

To summarize Charts I and II, it appears that in order to earn net approximately four times as much in 1926 as in 1888, the national banks had to earn gross more than nine times as much and pay out in expenses nearly twenty times as much. While invested capital jumped to four times the previous figure, earning assets multiplied ten times.

Chart III shows the ratios of gross earnings, expenses, losses and profits to capital and surplus. Here again it will be noted that gross earnings and expenses have increased much more rapidly than has invested capital. In 1888 the gross earnings to capital ratio was 17%. Held down by the long depression of the nineties, it was still hovering about the 17% level ten years later. By 1916 the ratio had doubled and by 1920 it had tripled. Since that time the ratio has dropped to 46%. The advance in the total expense ratio has been more striking. An expense ratio of 6% in 1888 had doubled by 1909, tripled by 1914 and was six times the 1888 figure in 1921. So rapid was the increase that the 1921 ratio was equal to the gross earnings ratio just four years earlier in 1917. With the exception of a small increase in the loss ratio, practically all of the great increase in gross earnings has been absorbed by operating expenses. As would be expected from Chart

I, the percentage of net profit earned on the investment does not show substantial variation. It was as high in 1900, 1904, 1908, 1916 and 1921 as it was in 1926. The average return from 1908 to 1913 was not less than that from 1921 to 1926. Judging by this criterion, the



Data: See Appendix, Table 3, page 97.

Source: Ratios computed from data taken from the Comp-

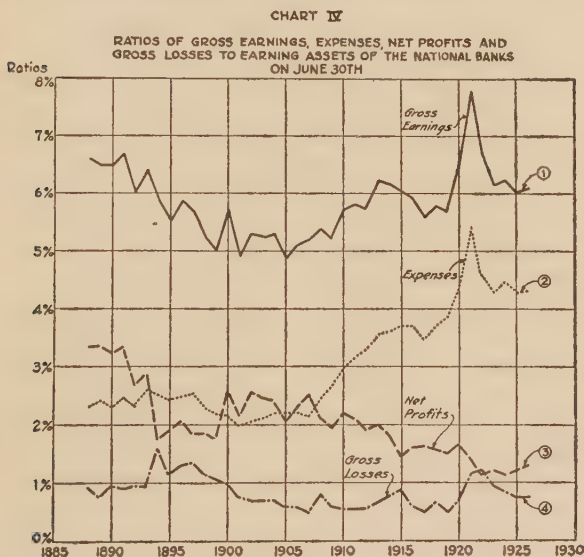
troller's annual reports and compiled in Appendix Tables 2 and 3, pages 96, 97, 98.

national banks as a class are neither more nor less attractive than formerly to the investor or shareholder.

The picture from the standpoint of operating effectiveness is presented in Chart IV. The data are plotted in percentages of earning assets. It will be noted that when the income, expense and loss accounts are related directly to the volume of business the banks appear to be extremely sensitive to cyclical fluctuations. This is the case because of the close interdependence which exists between the banks and their customers. Since interest received from loans and investments constitutes more than 85% of gross earnings, the gross earnings curve may be said to approximate roughly an average interest rate. In agreement with the trend in interest rates, gross earnings dropped from 6.57% in 1888 to 4.84% in 1905 and thereafter turned upward. From the low point in 1905, a high of 7.81% for the whole period was reached in 1921. Again conforming to the general movement of interest rates, the gross earnings ratio fell subsequently to 6.12% in 1926.

In the case of total expenses, there is on the whole a slightly downward, though mixed, trend from 2.30% in 1888 to 2.16% in 1907. From this year the curve turns sharply upward as it did in Chart III. With the exception of the dip in 1917, the upswing is continuous until a ratio of 5.39% is reached in 1921. Thereafter the ratio declined as precipitously as it had previously ascended, reaching 4.32% in 1926.

Both net profits and losses have a downward trend for the whole period. The decline is more pronounced in the case of profits, the change being from 3.33% in 1888 to 1.28% in 1926. For the same two years the loss ratios were .94% and .52% respectively.



Data: See Appendix, Table 4, page 99.

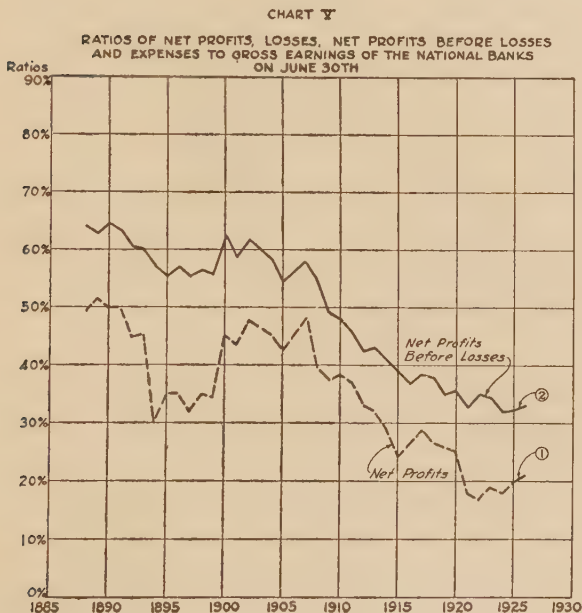
Source: Ratios computed from data taken from the Comptroller's annual reports. For earning assets, gross earnings and net profits see Appendix, Table 1, page 94. For expenses and losses see Appendix, Table 2, page 96.

The high inverse correlation between the cyclical oscillations of these two curves is apparent. From this observation it may be stated that while the profits for any year, or series of years in a short-time movement

may be determined primarily by the extent of the losses, the long-time trend in profits is fixed by forces more deeply rooted in the banking structure.

Chart V shows how gross earnings have been distributed since 1888. In that year total expenses absorbed 36.08% and losses 14.32% of gross earnings, leaving 49.60% for net addition to profits. In other words, 50% of gross earnings were required to pay expenses and meet losses. The other half of gross earnings was left for dividends and surplus account. In 1926 twice as large a portion of gross earnings, or 70.61%, was required to cover expenses. After charging off an additional 8.49% for losses, only 20.90% remained for dividends and surplus. Whereas one-half of gross earnings in 1888 remained for net profit after expenses and losses, in 1926 only one-fifth so remained.

Thus far the charts presented have indicated that while the ratio of net profits to capital and surplus has practically stood still, the ratios of net profits to earning assets and to gross earnings have trended distinctly downward. To the dramatic increase in expenses we must turn for a better understanding of the ever-widening gap between gross and net earnings. Facing a situation in which costs of operation were mounting more rapidly than income, the banks have been able to maintain a level of earnings attractive to investors by taking the narrower margin of profit thus imposed on a tremendously increased volume of business. Writing of the growth of the national banks, the Comptroller of the Currency said: "In the seven-year period from



Data: See Appendix, Table 5, page 100.

Source: Ratios computed from data taken from the Comptroller's annual reports. For gross earnings and net profits, see Appendix, Table 1, page 94. For expenses and losses, see Appendix, Table 2, page 96.

June, 1913, to June, 1920, the resources of national banks increased \$11,159,817,000, which is more than the total increase which took place in the entire fifty years from the inauguration of the national banking system in 1863 to the year 1913.”¹

¹ Comptroller, 1920, I, 2.

The earning assets of the national banks in 1913 were four and one-half times and in 1920, eight times as much as capital and surplus.² Earning assets, individual deposits and aggregate resources of all reporting banks in the United States more than doubled in this period. Capital and surplus increased only 36%.³ Generally speaking, banks of all classes wherever located have participated in the increase in volume of business and capital turn-over evidenced by these figures.

How was this expansion possible? The explanation is to be found in the phenomena of the period. First, the establishment of the Federal Reserve system in 1914, with its reduced reserve requirements, released large volumes of funds formerly tied up as reserves.⁴ Second, the enlarged gold reserves which resulted from the heavy imports of gold in the years immediately preceding our entrance into the war,⁵ and to mention a third, the large accumulations on the part of the general public of surpluses or savings. Of the increase in the supply of credit resulting from the operation of the Federal Reserve system, O. M. W. Sprague said: "Estimates of the saving thus secured vary somewhat, but for our present purpose it is sufficient to note that all calculations agree in the conclusion that gold is now a basis for at least twice as much credit as in the period before the Reserve system was established."⁶

² See Appendix, Table 1, page 94.

³ Comptroller, 1920, I, 260, 261.

⁴ E. A. Goldenweiser, *Federal Reserve System in Operation*, 20, 21.

⁵ *Ibid.*, 96-99.

Without attempting to evaluate the relative importance of these various factors, the fact of their concurrent existence during this period amply explains the manner in which such an amazing expansion of credit was possible.

Having now observed in a general way the major trends in national banking, the study will be brought to more effective focus by a detailed analysis of the operating accounts. Accordingly the next chapter will be concerned with the income of the banks and the relative importance of the sources from which it is derived.

⁶ "The Efficiency of Credit", in *The Annals of the American Academy of Political and Social Science*, January, 1922, 218. For further discussion on the same and closely related points, see E. M. Patterson, "Expansion and Contraction Under the Federal Reserve System", in *ibid*, 151-154. As to relative importance of savings and manufactured credit in the expansion, see David Friday, *Profits, Wages and Prices*, 207-210; Sprague, "Easy Money Due to Saved Capital, Not Bank Credit: Heavy Gold Export Safe", in *The Annalist*, January 13, 1928, 42; Charles E. Mitchell, "Interest Rates on Bank Deposits", in *American Bankers Association Journal*, February, 1928, 586, 587.

CHAPTER III

Analysis of Earnings

BEGINNING with his annual report for the fiscal year ending June 30, 1917, the Comptroller of the Currency has included figures for the operating accounts in detail. Using these data, it is now possible to analyze the changes in the component parts of gross earnings and total expenses during the nine-year period ending June 30, 1926. The value of the present analysis is in a measure impaired not only by the brevity of this time span, but by its unusual characteristics. Within the compass of these nine years both war and post-war reactions found expression in every phase of the business cycle. In the peak of 1920 the upswing in prices and interest rates which had its inception with the beginning of this century came to an end and the downward swing was begun. In view of these complexities the problem as to how these data may be used most fairly and effectively presents itself with no little force. Averages for two or more series of years are not practicable because the period is too short and too disturbed to permit of division. If the data are averaged for the whole period then we are embarrassed for want of corresponding averages with which to make comparisons for the purpose of trend determination.

For the present study the most instructive results will be obtained by comparing ratio percentages for 1918 with those for 1926, taking cognizance of the ratios for intermediate years when the situation indicates the desirability of so doing. This method of procedure is commended by the substantial similarity of the two years. In 1918 the national banks as a whole had \$7.36 of earning assets for every dollar invested in them. In 1926 earning assets were \$7.37 for every one of capital and surplus.¹ Capital turnover was the same at the end as it was at the beginning of the period. Again, if 1918 was one of the last years in the era of increasing interest rates and prices, 1926 was one of the early years in the new era of descending curves, if such it is to be.

The most striking of the tendencies noted thus far are those of the ratio of total expenses to earning assets to rise and of the net profits ratio to fall. As will be seen by reference to Chart IV, the long-time movements of both of these ratios apparently were continued through the nine years from 1918 to 1926. It would seem safe, therefore, to assume that the fundamental forces which have been operating for many years to reduce the unit margin of profit were present during this period in spite of its unusual characteristics. Over long periods of time the level of net profits represents primarily the differential between gross earnings and total expenses. While losses are an important factor in determining precisely what the profits of any given

¹ Computed from data in Appendix, Table 1, page 94.

year will be, they are of only secondary importance in establishing the level or trend. Since we are undertaking to arrive at a clearer understanding of this trend, the revenue producing accounts will be examined first.

As has been pointed out, by far the largest part of gross earnings is in the form of interest received from loans, discounts and investments. Consequently the magnitude of gross earnings depends principally upon the volume of earning assets and the rate of interest earned upon the same. The years 1918 and 1926 were singularly alike in respect to both of these conditions. At least part of the explanation, therefore, of the slight increase in the gross earnings ratio to earning assets from 5.78% in 1918 to 6.12% in 1926 will have to be sought elsewhere. The answer is suggested in the classification of income accounts used by the Comptroller. Here it is seen that the national banks, following the lead of the state banks and trust companies, are increasing the number and widening the range of the functions which they perform.

Income was received in 1918 from:²

1. Interest and discount,
2. Exchange and collection charges,
3. Commissions and earnings from insurance premiums and the negotiation of real estate loans,
4. Other earnings.

By 1921, "Profits of foreign exchange department" had become of sufficient importance to justify a sepa-

² Comptroller, 1918, II, 234 ff.

rate classification³ and in 1924 the same was true of "Trust department profits."⁴ The 1918 classification of accounts is used in the following tables in order to preserve the comparability of the figures. Accordingly, foreign exchange profits are included with domestic exchange and collection charges, and trust department profits with other income.

TABLE I⁵

Ratio of Income Accounts to Earning Assets of the National Banks for Fiscal Years Ending June 30, 1918, and June 30, 1926, with Increase or Decrease in Ratios.

Items	1918 %	1926 %	Decrease %	Increase %
Interest and discount.....	5.39	5.37	.02	...
Exchange and collection charges ⁶	.12	.17	....	.05
Commissions and insurance ⁷	.009	.005	.004	...
Other earnings ⁸	.26	.57	....	.31
Totals.	5.78	6.12	.02	.36

From the above table it is evident that the increase in the gross earnings ratio in 1926 over 1918 was very small and that practically all of it was accounted for by the growth of the item "Other earnings." Since this is the case, changes in the composition of gross earn-

³ Ibid, 1921.

⁴ Ibid, 1924.

⁵ Ratios computed by dividing the various income accounts by earning assets. For earning assets, see Appendix, Table 1, page 94. For income accounts, see Comptroller, 1918, II, 236, 237; Ibid 1926, 46, 47.

⁶ Includes foreign exchange profits.

⁷ Not significant in a study of all national banks. The Act of September 7, 1916, authorizes this class of business only in towns of 5,000 population or less. See Ibid, 1918, II, 235.

⁸ Includes trust department profits.

ings during this period are probably more important than the change in the ratios to earning assets. Table II has, therefore, been prepared to show the relative importance of each factor.

TABLE II^o

Ratios of Income Accounts to Gross Earnings of the National Banks for Fiscal Years Ending June 30, 1918 and June 30, 1926, with Increase or Decrease in Ratios

Items	1918	1926	Decrease Increase	
	%	%	%	%
Interest and discount.....	93.26	87.82	5.44	...
Exchange and collection charges.	2.14	2.69	....	.55
Commissions and insurance	.15	.09	.06	...
Other earnings.....	4.44	9.39	....	4.95
Totals.....	100.00	100.00	5.50	5.50

It will be noted that while 93.26% of the gross earnings of the national banks was derived from interest and discount in 1918, only 87.82% came from that source in 1926. The objection may be made that this comparison does not warrant the conclusion that the banks are tending to receive a smaller and smaller proportion of their income from interest, discount and dividends. Rather than this it may be contended that the comparison merely points to the proposition that when interest rates are trending upward and funds are in strong demand, as they were in 1918, receipts from interest on loans and investments will rise more rapidly than those from other sources. As a consequence the

^o Ratios computed by dividing income accounts by gross earnings. The absolute figures are from the same source as in Table I.

banks will derive a larger proportion of their earnings from interest. Conversely, when interest rates are on the downgrade, as they were in 1926, the proportion so earned will be smaller. A partial answer to this objection is suggested in Table III.

TABLE III ¹⁰

Ratios of Interest and Discount, of All Other Income Except Interest and Discount to Earning Assets; and of Interest and Discount to Gross Earnings, of the National Banks for the Years Indicated.

	Ratio of Interest and Discount to Earning Assets %	Ratio of All Other Income to Earning Assets %	Ratio of Interest and Discount to Gross Earnings %
1918.....	5.39	.39	93.25
1919.....	5.32	.41	92.84
1920.....	5.99	.57	91.26
1921.....	7.19	.62	92.06
1922.....	5.98	.70	89.52
1923.....	5.50	.65	89.43
1924.....	5.60	.63	89.89
1925.....	5.26	.79	86.94
1926.....	5.37	.79	87.82
1927 ¹¹.....	....	...	86.69

Comparing the ratios of interest and discount to earning assets with the ratios of the same item to gross earnings, it will be seen that in 1918, when the average return from interest on loans and investments was 5.39%, the amount so earned constituted 93.25% of gross earnings. Three years later the peak rate of yield of 7.19% produced interest returns equivalent to only

¹⁰ Ratios prepared from data compiled from the Comptroller's reports for the years shown.

¹¹ 1927 ratio computed from data in Federal Reserve Bulletins, July 1927, 552; December, 1927, 885.

92.06% of total revenues. Though the average yield increased two-thirds of 1% from 1919 to 1920, the proportion of gross earnings derived from interest moved in the opposite direction more than one-half of 1%. Again, in 1924, the interest rate at 5.60% was considerably above the 1918 level and yet only 89.89% of gross earnings came from this source. The more convincing exhibit is to be found in the ratios of all income other than interest to earning assets. Increasing irregularly throughout the period, the ratio in 1926 was slightly more than double the figure of 1918. The real reason for the decreasing relative importance of receipts from interest and discount is, therefore, not the change in interest rates, but the enlarged importance of other income producing activities. The character and extent of these will be better understood from the following analyses.

We saw in Table II that the decrease of more than 5% in the interest and discount ratio to gross earnings was offset by an increase in the exchange and collection ratio of .55% and an increase of 4.95% in the "other earnings" ratio. The following table shows the movements in and status of exchange receipts since 1921, the first year for which foreign exchange profits were shown as a separate item.

TABLE IV ¹²

Ratios of Domestic Exchange and Collection Charges and Foreign Exchange Profits to Earning Assets of the National Banks for the Years Indicated

Year	Domestic Exchange and Collection Charges	Foreign Exchange Profits
	%	%
1921.....	.13	.14
1922.....	.10	.10
1923.....	.09	.07
1924.....	.09	.04
1925.....	.09	.07
1926.....	.09	.08

Foreign exchange profits fluctuate from year to year more than domestic exchange charges, but the average for the two items is about the same for these six years. With the gradual perfecting of the system of clearings and collections operated by the Federal reserve banks, the domestic exchange receipts may be expected to show a decrease in the future. While the future of foreign exchange profits is problematical, it is safe to say that receipts from this source will not constitute more than a minor source of income.

The composite item "Other earnings" contributed only 4.44% of gross earnings in 1919. Its relative importance had more than doubled by 1926 with a ratio of 9.39%. In other words, one-tenth of gross earnings was derived in 1926 from miscellaneous activities whereas these sources produced only one-twentieth of

¹² Ratios computed from data in annual reports of the Comptroller for the years indicated. For earning assets, see Appendix, Table I, page 94.

gross earnings nine years earlier. In this change, the growing fiduciary business of the national banks has played and is playing a part, the portents of which are destined to be more significant than the immediate effects. The development since June 30, 1923 is indicated in the following table:

TABLE V¹³

Trust Department Profits, Other Earnings, and Profits From
the Sale of Securities for the National Banks for the
Years Indicated.
(In thousands of dollars)

Year	Trust Depart- ment Profits	Other Earnings	Profits from Sale of Securities
1924.....	\$5,059	\$80,006	.....
1925.....	5,951	111,129	.....
1926.....	8,255	103,714	.....
1927 ¹⁴	10,811	71,318	\$52,660

The increases in profits from fiduciary business over 1924 were in 1926, 62.58% and in 1927, 81.67%. The rapid increase which is now taking place in this phase of national banking activity is the natural result of a quarter of a century of competitive pressure. With the turn of the twentieth century, loan and trust companies increased in size and importance with great rapidity. Particularly was this so in the New England, Eastern, and to a lesser extent, the Middle Western States.¹⁵ In addition to the trust and fiduciary functions performed by these corporations, they engaged in business of a purely banking nature to a degree which subjected the

¹³ Comptroller, for the years indicated.

¹⁴ Figures for 1927 from Federal Reserve Bulletin, July, 1927, 552; Ibid, December, 1927, 885.

¹⁵ G. E. Barnett, *State Banks and Trust Companies*, 204.

national banks to an unprecedented amount of competition. The marked advantages enjoyed by the trust companies over the national banks was witnessed by their much greater growth in New York City from 1898 to 1907.¹⁶

In 1918, however, the national banks were finally given the authority to meet this competition. Under section 11 (k) of the Federal reserve act, as amended by act of Congress, September 26, 1918, national banks, when permitted by the Federal Reserve Board, are authorized to operate trust departments on a basis of substantial equality with competing trust companies organized under state law. On this subject, the Comptroller of the Currency said: "This legislation is therefore of very great importance to national banks. Under its terms states are in effect prohibited from denying to them the right to exercise trust powers where such powers are exercised by state corporations. They are therefore enabled to extend increased facilities to their customers, and it is hoped that full advantage will be taken of this opportunity to broaden their field of usefulness."¹⁷

Added to the rapidly mounting profits from the trust department activities of the national banks, as already shown, their desire to avail themselves of the privileges so granted is further attested by the number of permits issued.

¹⁶ Sprague, *History of Crises Under the National Banking System*, 227.

¹⁷ Comptroller, 1918, I, 13, 162.

TABLE VI¹⁸

Number of National Banks Holding Permits to
Exercise Fiduciary Powers.

Year	Number of Banks
1918.....	708
1919.....	1,074
1922.....	1,547
1923.....	1,819
1924.....	1,802
1925.....	1,951
1926.....	2,103

At the present writing, more than one-fourth of all the national banks (7,978) are empowered to operate trust departments. At the end of 1926 more than half of the banks with permits, or 1139, were exercising their trust powers.¹⁹ Discussing the benefits of the McFadden Act of February 25, 1927, J. W. McIntosh, Comptroller of the Currency, stated:

The new law has been beneficial in many other respects. The assurance of perpetual charters for national banks has * * * strengthened tremendously the trust powers of national banks for a trustee, to be valuable, should be permanent.

Since the enactment of the new law, 148 national banks have been granted permits to act in a fiduciary capacity and 235 national banks holding fiduciary permits started to administer trusts. During the year, 543 national banks adopted resolutions providing for organization and operation of trust departments.²⁰

The national banks have, however, just begun to ex-

¹⁸ Annual Reports of Federal Reserve Board for years indicated.

¹⁹ Ibid, 1926, 28.

²⁰ "The McFadden Act Justifies Itself", in *The American Bankers Association Journal*, January, 1928, 514. The Comptroller stated further that the authors of the Federal Reserve Act empowered the national banks to engage in trust operations because, "They saw the advantages to the public of making available as trustees, executors, administrators, guardians of estates, and in other fiduciary capacities the one unified banking system in the United States highly standardized in its practice and regularly supervised by the Federal Government. They

exploit this field of business. For the fiscal year ending June 30, 1927, the gross earnings of the state bank members of the Federal reserve system were only two-thirds as large as the gross earnings of the national banks, but the trust department profits of the former were nearly four times as large as those of the latter. 4½ % of state bank gross earnings was derived from fiduciary business. Only .86% of national bank gross earnings was derived from this source.²¹ A portion of this disparity between the state and national banks is no doubt due to the fact that the state member banks of the Federal reserve system are, for the most part, the larger institutions located in cities where the development of fiduciary business has been the most conspicuous. Leaving this consideration aside, however, it is evident that while the national banks are making rapid progress, they still have a long distance to go in this department before they will equal their state bank competitors.

recognized in national banks an agency through which trust facilities could be offered in practically every community in the nation. How far the national banks have penetrated the trust field is indicated by the fact that the assets of the individual trusts being administered by these banks now amount to more than \$1,000,000,000, while corporate trusts amounting to more than \$2,500,000,000 are being handled. More than 26,000 individual trusts were being administered by national banks during the past year. The most impressive part of their progress is that the growth has been recorded largely during the past few years. The number of national banks obtaining the right to exercise trust powers is increasing at the rate of more than 200 banks a year." Editorial comment in *ibid*, 525.

²¹ For state bank figures see Federal Reserve Bulletin, May, 1927, 383; *ibid*, November, 1927, 794; for national bank figures see *ibid*, July, 1927, 552; *ibid*, December, 1927, 885.

With the reports for the fiscal year ending June 30, 1927, it is possible for the first time to isolate another source of income formerly included in "Other earnings." This item is Profits on securities sold. Amounting to \$52,600,000 for the year, this was next to interest received, the largest single income account.²² Though the figures are not available to show it, it is probable that the profits derived from the sale of securities have trended upward in recent years. It is a matter of common knowledge that the banks have been increasing their bond accounts.²³ Furthermore, conditions have been peculiarly propitious for the profitable sale of security holdings, due to falling interest rates and enhanced valuations.

From the legal point of view, the McFadden Act has placed the national banks in a much better position to realize such profits. In this connection the Comptroller stated: "The first effect of making legal the practice by national banks of buying and selling investment securities was to establish clearly powers which theretofore had been exercised with hesitancy. The extent to which national banks will take advantage of these

²² Ibid.

²³ E. M. Stevens, "Why Banks Have Been Increasing Their Bond Accounts", in *Bankers Magazine*, September, 1927, 259; Lawrence Grover, "The New Situation Confronting Commercial Banking", in *The Annalist*, June 24, 1927, 891, 2; Sprague, "Interest Rates on a Long Downward Trend", *Ibid*, April 15, 1927, 526, 7. For earlier comment upon and analysis of this tendency see Jacob H. Hollander, "The Security Holdings of National Banks", in the *American Economic Review*, December, 1913, (III), 795-809.

new powers is not yet clearly ascertainable. Many banks are formulating plans to act as merchants of investment securities."²⁴

In view of the trend of interest rates, it is probable that the national banks in the near future will receive a lower rate of yield from their security holdings. This lower rate of yield may be to some extent avoided by a change in the type of securities purchased.²⁵ Profits from the sale of securities will, as has been said, continue because of higher capitalization on the basis of these lower yields. The rate at which profits are taken on the sale of individual securities is now higher than may be expected in the future because the banks still hold substantially appreciated bonds purchased shortly after the deflation of 1921.²⁶ The writer is of the opinion that the future increase in the volume of security transactions will be sufficiently great to more than offset the expected lower rate of profit taken on individual sales. If this proves to be true, new high levels will be reached in profits from this source.

It is not at this time possible to analyze further the item "Other earnings", because of the paucity of data. The probability is, however, that the total of these miscellaneous earnings, such as rents, commissions and service charges, will grow as the "department store" movement in banking progresses.

²⁴ "The McFadden Act Justifies Itself", in *The American Bankers Association Journal*, January, 1928, 514. See also W. Lichtenstein, "Analysis and Scope of Real Estate Loan Provisions of New McFadden Banking Act", in *Trust Companies*, March, 1927, 362, 363. In this article Lichtenstein quotes freely from an analysis of the McFadden Banking Act which

CHAPTER IV

Analysis of Expenses

The observations thus far made have pointed to the expense accounts of the banks as the focal point in explaining the rapidly widening gap between gross earnings and net profits. It has been seen that the banks in 1926 paid twice as large a part of their gross earnings for expenses as they did in 1888. Why have the costs of bank operation increased in such a striking manner? The answer to this question may be best found by isolating the particular items of expense which account for the increase. The only change in the Comptroller's classification of expenses occurred in the reports for 1919, 1920 and 1921, when contributions to the American National Red Cross were shown as a separate item. The accounts are, therefore, strictly comparable from year to year. Table VII gives the ratios of expense items to earning assets at the beginning and end of the period under consideration.

appeared in a pamphlet published by Messrs. Kiplinger, Babson & Jacobs of Washington, D. C. For text of the McFadden Banking Act, see Federal Reserve Bulletin, March, 1927, 181-186.

²⁵ For classification of investments showing the high proportion of so-called "legals" held by the national banks, see Comptroller, 1926, 33-37.

²⁶ For a discussion of security prices and yields and some of the factors influencing them, see C. E. Mitchell, "Interest Rates on Bank Deposits", in The American Bankers Association Journal, February, 1928, 587.

TABLE VII¹

Ratios of Expense Accounts to Earning Assets of the National Banks for Fiscal Years Ending June 30, 1918, and June 30, 1926, with Increase or Decrease in the Ratios

Items	1918 %	1926 %	Increase %	Decrease %
Interest and Discount on Borrowed Money.....	.15	.10	..	.05
Taxes.....	.38	.35	..	.03
Other expenses.....	.59	.70	.12	..
Salaries and Wages.....	.83	1.18	.35	..
Interest on Deposits.....	1.76	1.99	.23	..
Totals.....	3.69	4.32	.70	.07

The two smallest expense items show a ratio decline. Interest and discount on borrowed money has declined rapidly since 1921, as the banks have paid their borrowings from the Federal Reserve banks. Taxes, in conformity with the general trend, have likewise fallen steadily since 1921. The larger ratio for all expenses in 1926 is accounted for by salaries and wages, interest on deposits, and other expenses. Of these three, salaries and wages show by a considerable margin the largest absolute and relative increase in its ratio. The absolute increase in the wage ratio from 1918 to 1926 was .35% in contrast with .23% for interest on deposits and .12% for other expenses.

Which of these ratio increases were simply the result of the general economic phenomena of the time and which were the continuations of long time tendencies?

¹ Ratios computed by dividing expense accounts by earning assets. The absolute figures are from the same source as in Table I, page 94.

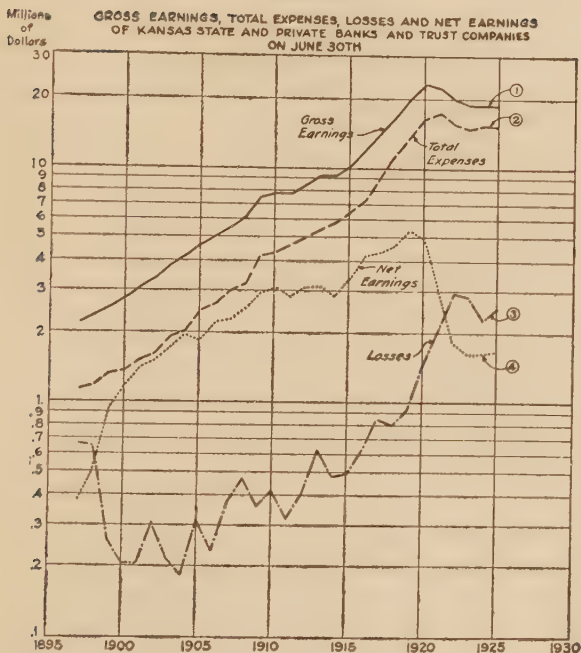
To put it in another way, to which of these items may we turn for an explanation of the persistent climb in bank expenses? Unfortunately it is not possible to give a direct answer to these questions because of the lack of national bank data. An answer by analogy is afforded, however, by the comprehensive statistical data prepared and published by the Bank Commissioner of the State of Kansas.² With this exception, state bank departments have not included operating statements of the organizations under their supervision. Here we have, however, a continuous record of the receipts and disbursements in detail of Kansas chartered banks covering the twenty-nine year period from 1897 through 1925. If, in its broad outlines, the story of banking in Kansas has been similar to that of the country as a whole, then these figures will be of value as indicators of the probable trends in national bank operations prior to 1918.

Chart VI shows the gross earnings, total expenses, losses and net earnings of the Kansas state and private banks and trust companies plotted on a semi-logarithmic scale. By a comparison of this chart with charts I and II it will be seen that the characteristics of the curves for the Kansas state banks are similar to those of the national banks in the country at large.

The likeness is made even clearer by a comparison of Charts VII and IV, on which are shown the ratios to earning assets of the operating accounts of the Kansas

² Brought to the attention of the writer by Mr. David Friday.

CHART VI



Data: See Appendix, Table 6, page 101.

Gross earnings is the total of interest and discount, exchange, rents, commissions, profits on real estate, and receipts from all other sources.

Total expenses includes officers' salaries and clerk hire, rent, insurance, taxes, interest on deposits, interest on borrowed money and disbursements for all other purposes.

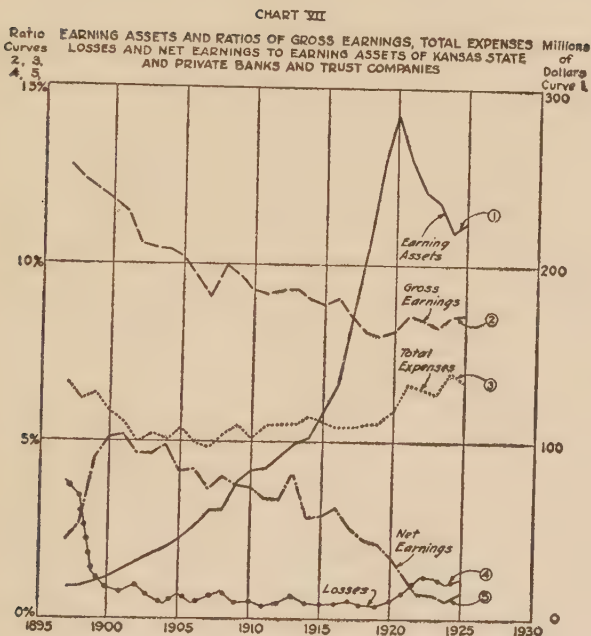
Losses includes bad paper charged off, losses on real estate, depreciation in real estate, depreciation in furniture and fixtures.

Net earnings is computed by deducting from gross earnings the total of expenses and losses.

Sources: Biennial reports of the Bank Commissioner of the State of Kansas.

state banks and of all the national banks in the United States respectively. Since the resemblance in the general movements of these two groups of data is so close, it is not improbable that the parallel changes taking place may be explained in terms of the same fundamental developments. The reactions of banks of different types and locations to broad operating changes show, among others, variations in the degree and in the time characteristics of the response. The Kansas exhibit, therefore, when considered as a key to the background of the national banks, will be enlightening only as to the general trends. It will not be more than suggestive as to the cyclical movements, the size, or relative importance of any particular income or expense item to any other group of banks typically dissimilar.

With this preliminary statement as to the validity of using the Kansas figures and their limitations for the purposes of this study, let us return to our analysis of the expense accounts. Was the increase from 1918 to 1926 in the salaries and wages ratio to earning assets of the national banks the projection of a long time tendency, or simply an upswing in response to the abnormalities of the period? The answer is approached through the medium of the Kansas analogy. Chart VIII presents the long time trends of the ratios of earning assets of the major expense items.



Data: See Appendix, Table 7, page 102.

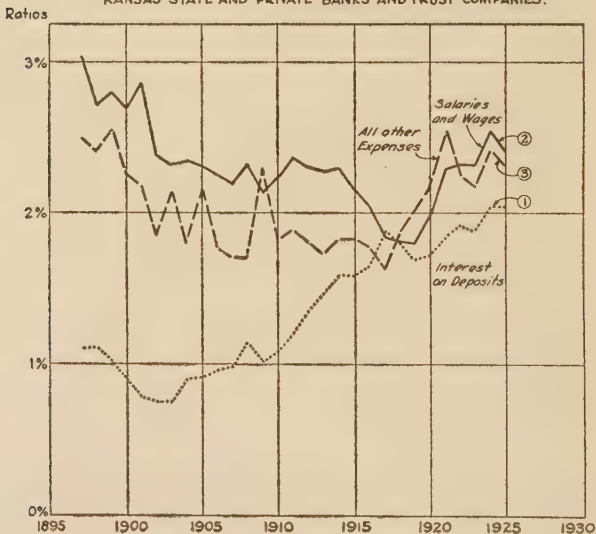
Earning assets includes loans and discounts, bonds and warrants. The figures used here are the averages of the amounts reported at the four report dates in each year.

Gross earnings, total expenses, losses and net earnings ratios are computed by dividing the absolute amounts for the same as they appear in Appendix, Table 6, by the Earning assets as shown in Appendix, Table 7.

Source: Biennial reports of the Bank Commissioner of the State of Kansas.

CHART VIII

RATIOS OF INTEREST ON DEPOSITS, OFFICERS SALARIES
AND CLERK HIRE AND ALL OTHER EXPENSES TO EARNING ASSETS OF
KANSAS STATE AND PRIVATE BANKS AND TRUST COMPANIES.



Data: See Appendix, Table 8, page 103.

Source: Biennial Reports of the Bank Commissioner of the State of Kansas.

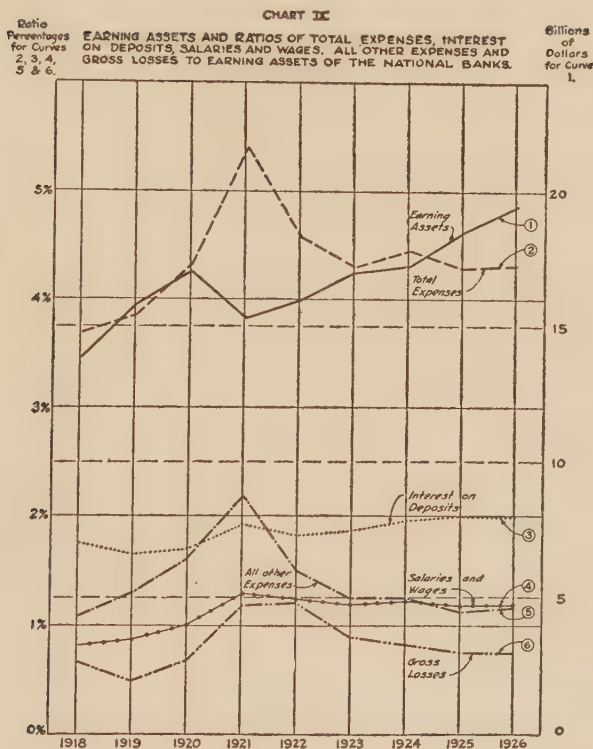
It will be observed that the period covered by the Kansas figures includes 1897, the last year of the long depression after the panic. Beginning with 1898, the banks entered upon a period of uninterrupted credit expansion which did not end until 1920. During these years the trend of the salaries and wages ratio to earning assets was unmistakably downward. Starting with 3.06% in 1897, it dropped to 2.37% in 1902. With

minor fluctuations up and down the ratio remained at about this level until the inauguration of the Federal Reserve system and the beginning of the war in 1914. Immediately thereafter ensued an unprecedented growth of business which culminated, after slowing down somewhat during the previous year, in the peak year of 1920. In the face of this expansion, the salaries and wages ratio fell to 1.80% in 1919. From 1919 to 1924 the trend of the ratio was as distinctly upward. This was a period of decreasing assets, with the exception of the year 1919 to 1920 when the rate of increase was decreasing. 1924 brought another increase in the volume of business and the wage ratio again fell.

While there appears to be no definite independent trend, either up or down, in the cost of labor relative to the volume of business done, there is indicated a rather high inverse correlation between this relative figure and earning assets. This is due to the lag in the adjustment of bank operations to rapidly expanding or contracting business. If the figures are found to have the same relationship in the case of the national banks as a whole, as in the case of the Kansas state banks, we may reasonably assume an approximate similarity in the long time trends of these two groups of data. The indication then would be that the unit labor cost borne by the national banks is not only not growing larger, but, as in Kansas, is less today than it was at the beginning of the century, not to mention earlier years for which there are no data. An inspection of Chart IX will show that the similarity upon which this

analogy rests is actually existent. The ratio of salaries and wages to earning assets of the national banks has been extremely responsive in the same inverse manner to the expansion and contraction of business. In both instances the change from 1918 to 1919 was negligible. Earning assets continued to grow in the next year but the rate had slackened and the wage ratio went up. After 1920 agricultural deflation depressed the Kansas banks and business fell off until the upturn after 1924. For all national banks, on the other hand, after the sharp decrease from 1920 to 1921 the concomitant of which was the highest salaries ratio of the period, credit expansion continued apace through 1926. During this movement, the ratio declined, dropping the most in those years in which earning assets increased the most, and vice versa.

The salaries and wages ratio increased .35% from 1918 to 1926 for the national banks and .57% in the same period for the Kansas banks. This disparity in increase would naturally be expected in view of the agricultural depression to which the Kansas banks were subjected and the inverse correlation found to exist between pronounced changes in the volume of business done and the operating expense ratios.



Data: For earning assets, see Appendix, Table 1, page 94.

For ratio of total expenses to earning assets, see Appendix, Table 4, 98.

For ratios of interest on deposits, salaries and wages, all other expenses and gross losses, see Appendix, Table 9, page 104.

Source: Annual reports of the Comptroller of the Currency.

It is important to note that from 1897 to 1919, when the ratio was declining, the general wage level was rising.³ It is probable that labor saving methods and devices have introduced economies in operation approximately equivalent in effect to the higher wage rates paid and, particularly in the last decade, the cost of the large number of free services performed by the banks. The fall in the ratio has come about then, at least in part, as a result of the lag between an increase in the volume of business and the corresponding increase in expenses and, the tendency already pointed out of banks to become larger units enjoying the operating economies thus made possible.

Thirty years ago the Kansas Bank Commissioner remarked on this point: "The largest item of expense to the average small bank is officers' salaries and clerk hire to which must be added the general expenses; by consolidating two banks this expense is practically reduced one-half, and the saving thus accomplished can and will be divided between the customers of the bank (in the form of reduced charges for accommodations) and the stockholders (in the form of increased dividends). The competition between banks in neighboring towns and cities will be sufficiently strong to insure fair treatment to the banks' customers."⁴

Because of the similarities noted between the Kansas state banks and the national banks the conclusion seems

³ Carl Snyder, *Business Cycles and Business Measurements*, 137,289.

⁴ Fourth Biennial Report, xi.

to be warranted that the rise in the ratio of salaries and wages is the resultant of temporary conditions rather than part of a long-time upward trend. Furthermore, since the trend of national bank earning assets from 1897 to 1920 was substantially the same as that for the Kansas state banks it is probable that personal costs are not very different today from what they were during the ten or fifteen years immediately preceding the war, and are probably less than they were before 1900.

The miscellaneous items of expenses, such as rent, insurance, taxes, interest on borrowed money and other expenses are totalled and treated as a composite item appearing as curve 3 on Chart IX. The general trend of this curve is the same as that for salaries and wages, although the oscillations from year to year are much more pronounced. Interest on borrowed money accounts for the wide fluctuations from year to year, the other items showing rather consistent increase throughout the period. The only other expense remaining to be considered is interest on deposits. Since all other expenses fail to explain the persistent rise in expense ratios of the national banks and of the Kansas state banks we may expect our analysis of this item of cost to be instructive.

Interest on deposits is by far the largest item of national bank expense. In 1926 it alone amounted to nearly as much as the total of all other expenses and was equivalent to nearly one-third of gross earnings.⁵ Since 1918 the absolute amount of the payments by the

⁵ For absolute figures see Comptroller, 1926, 46 ff.

national banks for interest on their deposits has increased every year, which is true of no other expense. Even after 1922, when interest rates were falling, the ratio of interest on deposits to loans and investments continued to rise. Turning again to the Kansas record on Chart VIII, the characteristic which distinguishes the interest on deposits curve from the others is its striking upward movement after 1903. In that year interest on deposits amounted to approximately one-sixth of net earnings; in 1910, one-third; in 1920, they were about the same and by 1925 interest payments were three times as much as net earnings. Compared with dividends, interest on deposits was nearly one-third as much in 1903; one-half in 1910, and by 1917, the depositors were receiving in interest slightly more than the stockholders in dividends. In 1925, interest payments were almost three times as great as dividends.⁶

In spite of the downward tendency of salaries and all other expenses, the upswing of interest on deposits has been sufficiently pronounced to shape the trend of total expenses. The movements of the interest curves for the Kansas state banks and the national banks during the period beginning with June 30, 1917, were, for the most part, similar. Strangely enough, the absolute increase in the ratio of interest on deposits to earning assets from 1918 to 1925 was in both cases, exactly the

⁶ These comparisons are based upon the absolute figures appearing in the Biennial reports for the years indicated. See Appendix, Tables 7 and 8 for ratios of interest on deposits and of net earnings to earning assets.

same, to wit: .25%. It is interesting to note in passing that in one year only, namely 1917, did the interest on deposits ratio exceed that of officers' salaries and clerk hire for the Kansas banks. In most years the latter ratio was by a large margin the higher of the two. This is the reverse of the national bank situation where interest on deposits is much the more significant of the two expenses. The difference is not to be explained in terms of higher interest payments by the national banks, but in terms of high cost of wages to the Kansas state banks. Some of the reasons for this contrast will be considered in the next chapter.

All factors thus far considered indicate that interest on deposits is the one item which has conspicuously padded bank expenses. This proposition as well as its corollary to the effect that other expenses are not becoming relatively larger, may be verified by another approach. If interest on deposits is the item that has been responsible for the increase in expenses, then the ratio of total expenses and losses less interest on deposits to gross earnings should now be approximately equal to the ratio of total expenses and losses in the eighties, nineties and early 1900's when interest on deposits had not yet become an item of real significance to the banks.

Accordingly, in the following two tables the comparison suggested above may be easily made.

TABLE VIII ⁷

Ratios of Total Expenses Plus Net Losses, Less Interest on
Deposits to Gross Earnings of All National Banks

1918-1926	
Year	%
1918.....	43
1919.....	45
1920.....	48
1921.....	58
1922.....	55
1923.....	50
1924.....	51
1925.....	48
1926.....	46

TABLE IX ⁷

Ratios of Total Expenses Plus Gross Losses to Gross
Earnings of All National Banks

1888-1909			
Year	%	Year	%
1888.....	49	1899.....	65
1889.....	49	1900.....	55
1890.....	50	1901.....	57
1891.....	50	1902.....	52
1892.....	55	1903.....	53
1893.....	55	1904.....	55
1894.....	70	1905.....	57
1895.....	65	1906.....	54
1896.....	65	1907.....	52
1897.....	68	1908.....	60
1898.....	65	1909.....	64

The comparison suggested reveals the fact that operating expenses and losses, when interest on deposits is eliminated from the data for the period from 1918 to 1926, are now approximately one-half of gross earn-

⁷ Ratios computed from data in Comptroller's reports. Gross earnings in Table IX include recoveries. Recoveries are not included in gross earnings in Table VIII. See page 103 for comment on this situation.

ings, as they were thirty-nine years ago.⁸ It is not entirely accurate to compare the figures in this manner, however, because it is not possible to deduct the interest paid by the banks on their deposits in the period covered by Table IX. This may be done with the Kansas data from 1897 through 1925. The results are shown in Table X.

TABLE X⁹

Ratios of Expenses and Losses, Less Interest on Deposits to Gross Earnings for Kansas State and Private Banks and Trust Companies.

Year	%	Year	%
1897.....	74	1912.....	49
1898.....	69	1913.....	50
1899.....	54	1914.....	51
1900.....	49	1915.....	49
1901.....	48	1916.....	47
1902.....	49	1917.....	47
1903.....	48	1918.....	50
1904.....	44	1919.....	52
1905.....	51	1920.....	57
1906.....	46	1921.....	65
1907.....	49	1922.....	68
1908.....	48	1923.....	69
1909.....	50	1924.....	68
1910.....	49	1925.....	67
1911.....	50		

As shown by Table X, there has been a remarkable long-time stability of all expenses and losses exclusive of interest on deposits. From 1899 through 1919 the average of the ratios is 49.19%. In no year is the

⁸ For pointing out the existence of this situation, the writer is indebted to Mr. David Friday.

⁹ Ratios computed from data in Biennial Reports of the Bank Commissioner of the State of Kansas.

deviation either way from the 50% mark as much as 5%. The situation is notably different, however, in 1897 and 1898 and in the years following 1920. During these latter years of agricultural deflation, land values were on the toboggan and there was little diversification to enable the Kansas banks to average down their heavy agricultural losses. Consequently the ratio of losses and expenses minus interest on deposits was in all of these years from 7% to 19% above the 50% level. For all of the national banks in the United States, on the other hand, the average condition was one of prosperity and the ratio hovered around 50%. The Kansas ratios, in contrast with those of the national banks, were also disproportionately high in 1897 and 1898. The largest part of this disparity is to be explained by the passage of the Kansas banking law of 1897.

Under this law the Bank Commissioner for the first time was given the power to enforce the statutes and the rulings of his office. This enactment also provided, among other things, that a bank's "assets must be worth the amount at which they are carried on its books". Speaking further of the benefits of this law, the Commissioner stated: "All excessive value of real estate, furniture and fixtures, and other property, and all worthless or questionable paper, have been eliminated. * * * The pruning process, the scaling down of assets has been severe, and occasionally a vigorous protest has been made against the enforcement of some of the provisions of our law or the requirements of the

Commissioner ; but I am pleased to say that in the main Kansas bankers have complied promptly and cheerfully with both." ¹⁰ Obviously then the large losses in these years immediately following the passage of the law just mentioned were the result of this drastic writing-down of assets.

The close agreement between the Kansas and the national bank data for the country as a whole establish with reasonable certainty the fact that interest on deposits has been persistently growing over a long period of years. What has caused the banks to increase their rate of payment for the use of funds placed with them?

The practice of paying interest on deposits dates back to pre-Civil War days. Economic disturbances such as the crises of 1857, 1873, 1884, 1893 and 1907 have never failed to focus the attention of bankers upon the evils of making such payments. The brunt of the criticism was borne by city banks which were paying interest on the deposits placed with them by country banks. In spite of the forcefully articulated opposition of regulating officials, clearing house committees, students of banking and the substantial banking opinion of the country, the practice has not only persisted, but grown to enormous proportions.¹¹ In

¹⁰ Four Biennial Report, vii, viii.

¹¹ For discussion of this subject, together with references to contemporary comment, see Sprague, *History of Crises Under the National Banking System*, 20, 21-24, 91-95, 119, 120, 375-378, 381-383, 385, 342-344, 367-370. See also Charles F. Dunbar, *The Theory and History of Banking*, 3d Edition, 1917, 243.

recent years the Comptroller has recommended on several occasions, without securing any action, legislation limiting the rate of interest which national banks may pay on their deposits.¹²

As will be noted from Chart VIII, the upswing in interest paid on deposits in Kansas had its real beginning after the panic of 1907. From this time on the significance of this item grew with surprising rapidity. Similarly the ratio of total expenses to gross earnings for the national banks remained practically unchanged until 1908, after which year the advance, due to interest on deposits, was emphatic and protracted.¹³ Conditions were propitious for this development. Beginning with the year 1899, prosperity again emerged and national bank profits jumped to a level approximating 10% on invested capital and remained at that average for a decade.¹⁴ Stimulated by this era of high profits in which bank credit was needed on an ever enlarging scale for the needs of expanding industry and commerce, a flood of new banking institutions of all descriptions opened their doors to meet these demands and to reap the profits which such enterprise offered.¹⁵

Interest on deposits thus developed from an inconspicuous to the largest item of bank expenditure in a period of intense and growing business activity the characteristics of which were rising prices and interest

¹² Comptroller, 1918, I, 75

¹³ See Chart V and pages 36 ff.

¹⁴ See Chart III.

¹⁵ G. E. Barnett, *State Banks and Trust Companies*, 203 ff. Also, Comptroller, 1920, I, 200, 261.

rates coupled with banking profits sufficiently high to arouse established banks to new efforts and to invite new and intense competition into the field. The largest profits, other things being equal, awaited those whose capital turnover was the largest. In no year from 1897 until 1920 did earning assets of the national banks show a recession. With the exception of cyclical dips in depression years, the ratio of earning assets to invested capital climbed upward throughout this period.¹⁶ The commercial banks in their search for funds vied with each other as well as with savings banks, the open money markets, the security markets and other outlets for capital accumulations. To match the yields offered in these quarters to holders of idle surpluses, the national and other commercial banks offered competitive interest rates on depositors' balances.

Not only during the years leading up to 1921 when the rates of interest earned by the banks on their loans and investments were increasing, but thereafter when these rates were falling, did the national banks continue to pay interest for funds on deposit at an increasingly high average rate.¹⁷ With the rate which the banks may receive for the use of their funds diminishing from year to year, the price which they pay for their raw materials—deposits—takes on a newly acquired significance.

In addition to the intense competition between commercial banks and between commercial banks and other

¹⁶ See Chart I.

¹⁷ See Chart IX.

finance institutions, the gradual transition in the character of bank deposits from demand to time deposits has no doubt contributed substantially to the high cost of funds. Of this factor more will be said in the next chapter wherein differences in banks classified according to geographical location will be examined.

CHAPTER V

Differences in Operating Accounts of National Banks Grouped According to Geographical Location

The operating trends for the national banks as a whole having been analyzed, it will now be helpful to compare the data by smaller groups of banks. The Comptroller divides the country into six main geographical areas, each one of which is further subdivided so as to show the operations of the banks in each central reserve city, in each of the "other reserve cities", and in each state exclusive of central and other reserve city banks. These latter banks are denominated "country banks".

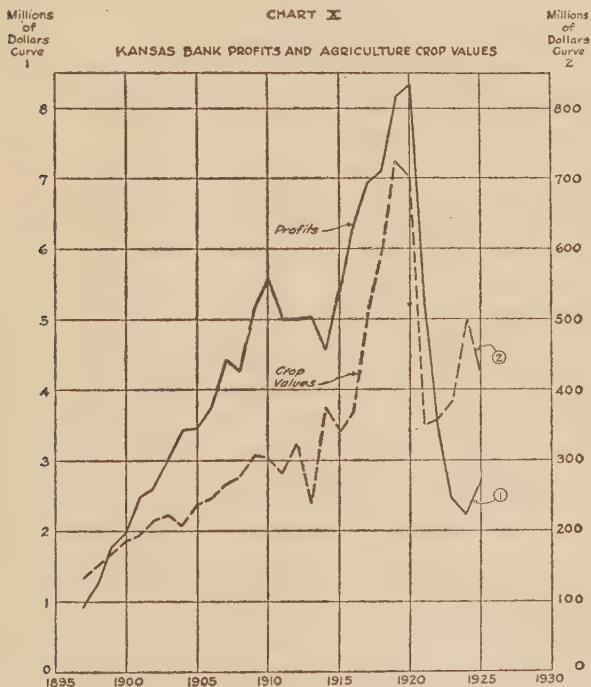
The table showing the ratios of net profits to capital and surplus indicates that there are considerable differences in profitableness of banks located in these different geographical areas, as well as differences from year to year in the same area.¹ For the four years from 1918 through 1921 the highest profits on capital investment were realized respectively in the Western States, the Eastern States, the Southern States and the Middle Western States. Thereafter through 1926 the Eastern States had the highest profit ratio. The upward tendency of profits from 1918 to 1920, the subsequent recession until 1923 and 1924, and the recovery

¹ See Appendix—Table 11.

of the next two years indicate the general sensitiveness of the banks to the movements of business. The variation from the usual trend exhibited by the Western States is to be explained by conditions peculiar to that locality. The banker inevitably participates in the business fortunes of the clientele which he serves. This is well illustrated by the continuous recession in profits in the Western States to the deficit figure for 1924 in response to the depressing effects of land value deflation. Kansas being predominantly an agricultural state, Chart X on which are plotted bank profits and crop values for that state from 1897 to 1925, directly evidences the dependence of banks upon local economic conditions. A Pearsonian coefficient of correlation for these data of $+.75$ corroborates, from a statistical point of view, the high degree of association existing between bank profits and the prosperity or depression experienced by the productive agencies of any given section. At the outset, then, fluctuations in bank profits would be expected in response to the varying time and extent of cyclical movements of business in different parts of the country.

Significant points of difference in the operations of the banks in the several geographical areas may be suggested by an examination of the data for some one year. Our main interest for the purposes of this study is not, however, in those operating differences which find their explanation in terms of the business cycle. We are interested in the discovery of relationships or substantial degrees of association between profits and

the characteristics of the operations which have produced them. Such findings will be of value in explaining past profits as well as in predicting future expectancy. We will proceed to examine the gross income and expense accounts by areas.



Data: See Appendix, Table 10, page 104.

Bank profits is the total of the profits earned by national, state and private banks and trust companies.

Agricultural crop values are the home values in Kansas of the various agricultural products of that state.

Source: Profits of state and private banks and trust companies from Biennial reports of the Bank Commissioner of the State of Kansas. See Appendix, Table 6.

Profits of the national banks from the annual reports of the Comptroller of the Currency.

Agricultural crop values from reports of the Kansas State Board of Agriculture.

TABLE XI²

Ratios of Net Profits and Gross Earnings to Earning Assets of the National Banks by Geographical Areas For the Fiscal Year Ending June 30, 1926

Locality	Net Profits	Gross Earnings
Eastern States.....	1.50	5.80
Southern States.....	1.47	7.07
New England States.....	1.18	5.54
Middle Western States.....	1.08	5.92
Pacific States.....	.99	6.63
Western States.....	.54	7.26

It will be seen that the groups are arranged in order of profitableness, proceeding from the highest to the lowest net profits, and that the order is the same as that shown by the ratios of net profits to capital and surplus for the same year.³ Wherein do we find the explanation of these differences? Why, for example, should the banks in the Eastern States be nearly three times as profitable as those in the Western States? It is evident that the primary determinant in 1926 was not gross earnings. With the exception of the Southern and New England States, the relationship is an inverse one, gross earnings increasing as the net profits become smaller. The part played by expenses and losses is shown in Table XII.

² For net profits and gross earnings data see Comptroller, 1926, 44 ff. For earning assets see *ibid*, 594.

³ See Appendix, Table 11.

TABLE XII⁴

Ratios of Net Profits, Total Expenses and Net Losses to
Earning Assets of National Banks by Geographical Areas
For the Fiscal Year Ending June 30, 1926.

Locality	Net Profits %	Total Expenses %	Net Losses %
Eastern States.....	1.50	3.87	.43
Southern States.....	1.47	4.95	.66
New England States.....	1.18	3.94	.41
Middle Western States.....	1.08	4.39	.45
Pacific States.....	.99	4.98	.66
Western States.....	.54	5.58	1.14

The tendency of net profits to decrease as gross earnings, expenses and losses rise is unmistakable. Those areas in which it is possible for the banks to make large gross earnings are apparently subject to conditions which make it more expensive as well as more risky to do business. For this particular year, however, the expense and loss differential is greater than that of gross earnings. The variation in net losses between the most and the least profitable groups, namely: the Eastern and the Western States, is .71%. The difference in expense ratios is 1.71%, making a total expense and loss ratio variation of 2.41%. To meet this disadvantage of 2.41%, the Western States have a gross earnings ratio advantage of only 1.46%. Consequently the Eastern States earn 1% more net on their earning assets and 6% more on their capital investment than do the Western States.

When the national banks are grouped according to the percentage earned net on their invested capital the

⁴ Data from same source as in Table XI.

same relationship between operating accounts and profits is found to obtain.

TABLE XIII⁵

Ratios of Gross Earnings, Total Expenses, Net Losses and Net Profits to Invested Capital of the National Banks for the Year Ending June 30, 1923, Grouped According to Per Cent. of Net Profits.

Group	Gross Earnings %	Total Expenses %	Net Losses %	Net Profits %
Banks showing a net loss	51.75	41.95	13.50	3.70 Loss
Banks earning under 5%	46.63	35.94	7.78	2.91
Banks earning 5% to 8.48%	39.43	28.45	4.20	6.78
Banks earning over 8.48%	44.04	29.65	3.45	10.94

Without regard to location or other differences, the banks making the largest net profits were those with low gross earnings and the accompanying low expenses and losses. As was the case when the banks were grouped according to geographical areas the direct correlation between gross earnings, total expenses and net losses is high. According to both classifications, geographical and percentage of net profits, the widest margins of profits were secured by the banks in the lower gross earnings brackets. The banks showing a net loss earned gross on their invested capital 7.71% more than banks in the group which earned over 8.48%. The expenses and losses of the group showing a net loss were 22.35% more than those of the most profitable group of banks. The advantage of the latter in operating

⁵ This table is a rearrangement of the one prepared by David Friday which appears in his article, "Banking Profits", in *The New Republic*, July 25, 1923, 224-226. The compilations are from data taken from the Comptroller's report for 1923.

costs and losses was, therefore, more than three times as great as their disadvantage in gross earnings.⁶

Aside from short time fluctuations, there are definitely higher levels of gross earnings and total expenses in the southern and western than in the eastern areas. This is not so of losses. Losses are large or small in different localities depending upon the particular conditions obtaining at the time. Wherever and whenever net profits dip temporarily below their usual rate, losses higher than the usual rate will be found almost invariably. It is evident, therefore, that gross earnings and expenses ratios are in the main the results of conditions of a fundamental and continuing nature in each area. That the same conditions which make possible high gross earnings also make necessary high expenses is indicated by the fact that the two uniformly go together.

It must not be assumed, however, that the national banks located in or near the eastern money markets enjoy consistently, or most of the time, larger profits than the banks of the west. As a matter of fact the contrary has been the case. Average earnings on invested capital from 1900 to 1920 were larger in the

⁶ Mr. Winfield W. Riefler of the Division of Research and Statistics of the Federal Reserve Board is now preparing a monograph on money rates and money markets in the United States. Part of his findings are published in the *Federal Reserve Bulletin*, December, 1927. By using ratios of average annual expenses and earnings to average loans and investments for all member banks from 1919 to 1925, Mr. Riefler comes to the same conclusion about the relationship between earnings, expenses and losses. See *ibid* 815 ff.

Western States than for any other section of the country, not excepting the national banks located in New York City. The average of the Western States for these two decades was 13.50%; for New York City, 12.24%.⁷ Throughout this twenty-year period operating costs in the west averaged higher than in New York City and the eastern parts of the country, but earnings were sufficiently large in the western area not only to offset these high costs but to leave for the stockholders the high profit ratio just mentioned.

It is not surprising, however, that in the showings here made the data for 1923, 1926 and, indeed, for the six years selected by Riefler should point to an advantage in favor of the eastern banks. Since 1920 the Pacific and particularly the Western States have been suffering from severe depression caused by the deflation of real estate values. In marked contrast with other sections of the country, national bank prospects in these two areas have been so unattractive to investors as to cause a steady reduction in bank capital funds since the beginning of the recession. This is not to mention the toll taken by bank failures and suspensions. High losses and expenses consequent upon slack business have minimized profits. The post-1921 period has, then, been particularly disparaging to the national banks in the Western and Pacific States.

On the other hand, the national banks of the Southern States, which have shown an uninterrupted increase

⁷ Friday, "The Banker's Lament", in *The New Republic*, December 14, 1924, 111 ff. For ratios see Appendix, Table 11.

in capital and surplus from the year 1899, have in the three years ending with 1926, been second in profitability only to the banks of the Eastern States. During these years the industrial pulse of the south has measurably quickened. To this section investors seeking outlets for surplus funds have shifted their focus. Growth and development have made it possible for the banks of the Southern States to enjoy large gross earnings. Their expenses and losses were also high, to be sure, but not high enough to prevent them from making a more favorable showing since 1921 than the banks of either the Pacific or Western States.⁷

The historical approach would seem to indicate the conclusion that the remote and comparatively undeveloped sections of the country are subject to more violent fluctuations in business tempo than is the eastern section where economic activities are more mature and better balanced. It is not safe to generalize as to the presence or absence of profit-making propensities in the national banks of any particular section of the country. For stability of profits, certainly the banks of the older and more diversified states of the east excel. For spasmodic high and low earnings, we turn to the "frontier" states of the west and south. To forecast where in the United States the national banks of the future will be the most profitable would require that we predict not only the trend of economic development in this country, but the part which these banks will play in such development.

⁷ See Tables XI and XII and Appendix, Table 11.

With this preliminary survey of the gross receipts and expenditures of the banks by geographical areas, we will turn to the consideration of bank income in detail, as shown in Table XIV.

TABLE XIV^a

Ratios of Income Accounts to Earning Assets of National Banks for Year Ending June 30, 1926, by Geographical Areas.

	Interest Received	Domestic Exchange	Profits of Foreign Exchange	Trust Dep't Profits	Other Earnings	All Earnings Except Interest
Eastern States..	4.97	.06	.13	.05	.59	.83
Southern States.	6.33	.19	.01	.03	.52	.75
New England States.....	4.82	.03	.05	.05	.59	.72
Middle Western States.....	5.30	.09	.05	.03	.44	.61
Pacific States...	5.94	.11	.05	.04	.50	.70
Western States..	6.51	.14	.003	.03	.57	.77

Revenue derived directly from interest on loans and investments accounts for more than 85% of gross earnings in all districts. While the variation between the highest and lowest ratios for any one or the total of all items except interest only slightly exceeds one-fifth of one per cent. of earning assets, there is a spread between interest earned in the New England States (4.82%) and interest earned in the Western States (6.51%) of 1.69%. The significant differences in income are, therefore, to be explained in terms of the conditions which cause variations in the receipts from interest on loans and investments.

^a Data from same source as in Table XI.

The ratio of interest and discount received to earning assets is, in a broad sense, tantamount to an average of the interest rates secured by the banks on all of their loans and investments. The explanation of the differences in earnings from this source is to be found, then, in a study of the interest rates obtaining in the various sections of the country. Writing of "Geography as a factor in differentials between customers' rates", Riefler says: "Differentials between cities, or according to geographical location * * * are essentially differentials between different customers' money markets. When the rates applying to the bulk of the loans in any given city are compared there is no great variation according to the type of loan on which the rates are quoted. In other words, they conform in a sense to the standards of a single competitive money market. Between cities the variations in these rate levels are marked." ⁹

Riefler adduces evidence to support his conclusion that interest rate differentials between cities and localities "correspond first to differences in banking connections, such as those which distinguish reserve bank and branch cities, second, to the size of the local money market, as measured roughly by its total deposits, and third, according to geographical location, the highly developed east having lower rates other things being equal than the less developed west." As he explains, it is easy to see that rates in reserve cities would be lower because of the competition of banks with the

⁹ Riefler, Federal Reserve Bulletin, December, 1927, 809, 810.

open money markets in the financial centers. That rates should be lower in cities having large total deposits is a matter of supply of and demand for funds. In the larger cities, and particularly the reserve bank and branch cities, the supply of funds is increased by the deposits of funds made by banks located in the smaller cities and towns with their correspondent banks in the money centers. These cities, because they are large and assume the role of banking centers, attract a larger total of deposits than would otherwise come to them. The supply of funds is thus greater in the larger cities and access to additional funds is also more direct and expeditious than it is in the smaller communities. On the other hand, the demand for funds is relatively greater in the smaller and less developed communities because of the larger proportion of local loans used for out-of-town settlements than is the case in the larger cities.¹⁰ Whether or not the explanations of these differences, as presented, tell the whole story, the fact remains that customers' rates in the years under observation varied inversely with the total deposits in the various money markets.

Returning to Table XIV, apparent exceptions to the above indicated variations in interest rates present themselves. These seeming exceptions are to be explained by the lack of comparability of the data. Riefler's findings are based upon state as well as national bank members of the Federal Reserve system. Furthermore, the geographical divisions used by him

¹⁰ Ibid, 814, 815.

differ from those of the Comptroller. The high rate of interest received by the national banks in the Southern States and the low rate received in the Pacific States are the two figures which seem to be most strikingly inconsistent. A comparison between the geographical inclusions of Riefler and the Comptroller will make clear the reasons why the data for these two areas seem to disagree with the general principle of rate differentials.¹¹

Before passing on to the expense accounts it will be worth while to take a hurried glance at some of the less important income accounts. Receipts from domestic exchange and collection charges are larger relatively in the Southern, Western and Pacific States. It may be assumed that this is primarily due to the seasonal transfers of funds back and forth between the agricultural interior and the money centers.¹² Profits of foreign exchange are, due to the large volume of foreign settlements handled through New York, more than twice as important an item in the Eastern States as in any other group. There is no reason to believe that profits from this source will become significantly larger in the near future, nor that the comparative importance of these profits to the various areas will change materially.

The trust department profits ratio for 1926 was highest in the Eastern and New England States, although the differences in the ratios are so small as to

¹¹ Ibid, 810, 884, 812, 813.

¹² J. T. Holdsworth, *Money and Banking*, 1920 Edition, 226 ff.

be almost negligible. It will be remembered that it was in these same states that the trust companies were the most aggressive in their early stages.¹³ It is not surprising that the particular national banks subjected to trust company competition in its most intense form should be the first to take advantage of the powers recently granted to them to engage in fiduciary activities. In Table XV the profits from this source in the different areas are compared for three years.

TABLE XV¹⁴

Trust Department Profits of the National Banks by Geographical Areas for the Fiscal Years Ending June 30, 1924, 1925 and 1926, and the Percentage Increase in 1926 over 1924
(In thousands of dollars)

	1924	1925	1926	Per Cent, Increase in 1926 over 1924
New England States.....	479	604	822	71.61
Eastern States.....	2,447	3,163	4,341	77.40
Southern States.....	428	531	762	78.04
Middle Western States....	1,134	961	1,381	21.78
Western States.....	265	365	358	35.09
Pacific States.....	306	326	574	87.58

From this table it is apparent that the national banks in all sections from year to year are securing larger profits from fiduciary undertakings. The greatest rate of increase is enjoyed by the banks of the Pacific States and the smallest rate is shown by the Middle Western States.

The Eastern, New England and Western States enjoy the largest ratio return from "Other Earnings".

¹³ See page 36.

¹⁴ Comptroller, 1924, 54 ff., 1925, 48 ff., 1926, 44 ff.

While it is probable that profits on securities sold account for from one-third to one-half of the total of this item for all of the national banks, data are not available to make it possible to compare the returns by areas. Nor is it possible to compare the income from rents, commissions and service charges, which items are included in "Other Earnings". In any event, it is clear that no one section of the country has a substantial advantage over any other in regard to these miscellaneous earnings. The maximum variation for the year was only .15%. The maximum variation in the ratios for all earnings except interest was only .22%; for interest received, it was 1.69%. Although there is a marked tendency to increase their receipts from other sources, interest received on loans and investments is still the dominant source of bank earnings. Because of its magnitude and the large variation in the interest earned by the banks in different parts of the country, this item is of primary importance in profit determination.

It has already been pointed out that high expenses and losses usually accompany large gross earnings. Not only is this true for the national banks, but for all member banks of the Federal Reserve system. Low gross earnings are accompanied by low operating expenses and losses, and conversely. The competitive conditions which obtain in the older, larger and better developed money markets, causing low gross earnings, also make it possible to operate more cheaply. In the established money markets the banks are larger in size

and can, therefore, enjoy the operating economies and security made possible by large scale operations under the direction of highly skilled personnel.¹⁵

By analyzing and making comparisons between specific elements of cost in the different geographical areas it will be possible to determine approximately which expenses are peculiarly responsive to local conditions and which are more nearly uniform throughout the country. Understanding thus better the importance to bank operating expenses of provincial forces, it will be less difficult to arrive at conclusions concerning the degree to which certain conditions lend themselves to the realization of low banking costs. Table XVI provides the data for these comparisons for the year 1926.

TABLE XVI¹⁶

Ratios of Expense Items and Losses to Earning Assets of the National Banks by Geographical Areas for the Fiscal Year Ending June 30, 1926.

Areas	Wages	Interest on Bor'd Money	Interest on Deposits	Taxes	Other Expenses	Net Losses
	%	%	%	%	%	%
New England States..	.95	.09	2.08	.24	.58	.41
Eastern States.....	.97	.09	1.92	.28	.60	.43
Middle Western States	1.20	.07	2.01	.41	.70	.45
Pacific States.....	1.60	.10	2.05	.39	.85	.66
Southern States.....	1.48	.18	1.96	.48	.86	.66
Western States.....	1.72	.10	2.30	.45	1.01	1.14

In the above table the areas are arranged so as to proceed from the one in which the national banks had the lowest to the one in which they had the highest gross earnings. Except for interest on deposits and

¹⁵ Riefler, Federal Reserve Bulletin, December, 1927, 815-817.

¹⁶ Data from same source as in Table XI.

on borrowed money, all of the expenses and the net losses increase with gross earnings. When the expense accounts are arranged according to the difference in the ratio between the area having the largest and the area having the smallest ratio, they appear as in Table XVII. It will be noted that interest and discount on borrowed money and interest on deposits are grouped together. This is done because the total of the two items represents more nearly accurately the cost of funds used for earning purposes than does either one separately.

TABLE XVII¹⁷

Absolute Difference in Expense Ratios to Earning Assets for
National Banks Between Geographical Areas Having
Maximum and Minimum Ratios

Item	Ratio Difference %
Salaries and Wages.....	.77
Other Expenses	.43
Interest and Discount on Borrowed Money and Interest on Deposits	.39
Taxes.	.24

The absolute variation in the salaries and wages ratio between areas is much greater than that of any other item. Because salaries and wages and interest payments are so much larger in absolute amount than taxes and other expenses, it will be instructive to note the relative variation of these accounts according to location. Table XVIII shows the relative data.

¹⁷ Computed from data in Table XVI.

TABLE XVIII ¹⁸

Low and High Ratios of Expense Accounts to Earning Assets
of National Banks for Geographical Areas, Together With
Percentage of High to Low Ratio for Year Ending

Item	June 30, 1926		% of High to Low Ratio
	Low Ratio %	High Ratio %	
Taxes.	.24	.48	200.00
Other Expenses	.58	1.01	174.14
Salaries and Wages.	.95	1.60	168.42
Interest and Discount on Bor- rowed Money and Interest on Deposits	2.01	2.40	119.40

It is evident that the greatest relative variation between geographical areas is to be found in taxes. Had net losses been considered in the last two tables, the item would have appeared next to the top in both cases due to the high loss ratio of 1.14% in the depressed Western States. Aside from this ratio, net losses would have appeared at the bottom of the list in both tables. In other words, unless conditions deviate more than usual from the average, bank losses in all parts of the United States tend to hover around the one-half of one per cent. of earning assets mark.

Differences in taxation policy in the several states account for the wide variations in the taxes borne by the banks on their properties. Since taxes are determined by forces operating independently of the banking world and beyond its control, the further consideration of this expense will be of little usefulness to this study.

As shown by the last two tables, salaries and wages account for the largest part of the sectional variation

¹⁸ Computed from data in Table XVI.

in expenses. The total cost of salaries and wages is not, however, to as large an extent as are taxes and other expenses determined by conditions peculiar to the location of the bank. Interest paid by the national banks for the funds used is apparently least of all controlled by local conditions. Though it is by far the largest item of expense, its relative variation is less than that of any other. The tendency of expenses to correlate directly with gross earnings and indirectly with net profits does not apply to interest on deposits. In other words, low cost advantages in the purchase of raw materials—the funds which form the basis of loans and investments—are not concentrated in the established money market regions, as is true of most of the other expenses.¹⁹ The facts seem to justify the conclusion that the amount of interest which it is necessary for the banks to pay to obtain funds is determined by conditions general to the financial structure of the whole country more than by circumstances obtaining in any particular money market.²⁰

The most surprising interest on deposits ratio is that for the New England States. Instead of being in the lower brackets, as is the operating expense ratio for

¹⁹ See Table XVI.

²⁰ Riefler, dividing the country into four main areas and using averages of Federal Reserve member bank data for a six year period, found a maximum variation in the combined ratios of interest on deposits and interest on borrowed money of only slightly more than one-sixth of one per cent. See Federal Reserve Bulletin, December, 1927, 815, 816. In view of inaccuracies which cannot be entirely eliminated at this time, any attempt to explain such minor ratio differences would have little more than theoretical value to commend it.

this area, the national banks of the New England States have an interest on deposits ratio exceeded only by that of the Western States. The explanation of this fact may well be the starting point of an inquiry into the conditions which cause high rates of interest to be paid upon deposits. Such an undertaking, however, lies beyond the scope of the present study.

Suffice it to say here that the national banks of the Boston Federal Reserve district, which is practically the same as the New England States as classified by the Comptroller, pay the highest average rate of interest on demand deposits and the fourth highest rate among the reserve districts on time deposits.²¹ The high average rate of interest paid by the New England national banks on demand deposits is evidently not entirely the result of high rates paid on such accounts. In 1919 and 1920, the last years for which such data is available, the national banks of the New England States paid interest on a larger percentage of the total number of demand deposits than the national banks of any other section.²²

As to the real reasons for these rates, a study of the remarkable developments taking place in this area would no doubt be enlightening. The national banks of the New England States experienced a larger percentage increase in 1926 over 1918 than any other geographical group in loans, discounts, investments,

²¹ Computations upon which these conclusions are based were made from data appearing in *Ibid*, July 1927, 552, and *Ibid*, December, 1927, 885; and Comptroller, 1926, 404.

²² Comptroller, 1920, I, 112.

average earning assets per bank, and total individual deposits.²³ When this exhibit of growth is considered in connection with the equally surprising preceding record of lethargy, as evidenced by the fact that the capital invested in these banks was larger in 1876 than in any subsequent year until 1925, it will be seen that many factors, including the rate and nature of growth, may be assigned as functions influencing rates paid on deposits.

From the analysis of geographical differences, it is clear that the national banks in no section or locality consistently have the advantage under all kinds of changing conditions. The banks of the industrial and commercial east are less susceptible to the cyclical movements of business than are the remote sections where there is little diversification in economic activity. In return for this greater stability the eastern bankers have paid in the past and will pay in the future by taking more conservative profits in periods of rising prosperity.²⁴

It would be interesting to conclude this analysis with a comparison between the profits of national banks and those of state chartered institutions. Such a comparison is not possible, however, because of the absence of comparable data. There are no figures available show-

²³ Comparisons based upon data in Comptroller's reports for 1918 and 1926.

²⁴ This, of course, is not true of the New York City banks which, prior to the establishment of the Federal Reserve system, carried the brunt of financial crises and in turn realized large profits when business was good.

ing the earnings and expenses of all state banks and trust companies engaged in commercial banking. The Federal Reserve Board reports the earnings and expenses of state bank and trust company members of the Federal Reserve system. Comparison of the data for these member state institutions with the data for all national banks would permit of no intelligent conclusions owing to the fact that, generally speaking, only the larger state banks located in cities are members of the system. Obviously no substantial value could attach to a contrast between the large state banks and trust companies situated in cities and all of the national banks, large and small, wherever located.

CHAPTER VI

Summary and Conclusions

In broad outline, the facts brought out by the foregoing analyses are as follows:

The ratio of gross earnings to earning assets has tended to follow the curve of interest rates. Accordingly, since 1920 the trend of national bank earnings has been downward. The proportion of gross earnings derived from interest on loans and investments is decreasing and proportional returns from other sources are increasing due to falling interest rates, the use of a larger part of bank funds for investment purposes, and marked increases in the absolute amounts received from other sources.

Total expenses, expressed as a percentage of earning assets, climbed rapidly from 1907 to 1921, after which they turned downward. Expenses have increased much more rapidly than have gross earnings. As a result, net profit margins have been narrowed. Interest paid on deposits is the primary cause of increasing banking costs as evidenced by the fact that the share of gross earnings absorbed by other expenses and losses is practically the same today as it was forty years ago.

Losses show marked sensitiveness to business oscillations. While losses are of importance in determining

the net profits earned in any given year, they have not proven to be of significance in shaping the secular trend of net profits. At the present time the national banks are writing off a larger ratio of losses on their earning assets than they did on the average in the pre-war era. The present ratio is, however, considerably less than the average during the decade preceding 1900.

The percentage of net profits to earning assets has trended downward since 1888. The most conspicuous and consistent decline has been since 1908, the year in which the striking increase in expenses began. The long-time trend of net profits to capital and surplus is practically horizontal. The smoothness of the curve is broken, however, by the effects of business cycles and internal maladjustments in banking practice. Of the former nothing further need be said at this time. The most interesting period of maladjustment is the one running from the crisis of 1907 until 1915. During these years capital investment and bank credit expansion proceeded at approximately the same rate. Expenses, and more particularly interest on deposits, were increasing more rapidly than interest and other receipts. Consequently net profits earned on invested capital fell steadily. In the war period this disparity between rate of increase in expenses and earnings continued, but capital turnover nearly doubled causing profits on invested capital to rise violently until the crisis in 1920.

Bank profits are in high degree directly dependent upon the economic condition of the community in which

they are earned. The cyclical fluctuations of the curve of net profit ratios to invested capital for all of the national banks in the United States shows this clearly. More particular evidence on this point is afforded by the close correlation during the last thirty years between the profits of state supervised commercial banks of Kansas and the value of agricultural products in that state.

Comparisons between the profits, over long periods of time, of national banks located in different geographical areas indicate the fact that no section of the country is per se possessed of advantages which make possible the realization of larger profits than those obtainable in other sections. The explanation of the profit variations thus revealed would seem rather to lie in the relation between supply and demand for bank credit. Accordingly, the banks of that section of the country which presents the greatest disparity between its rate of economic growth and the development of its institutions purposed to supply the necessary capital funds therefor, will enjoy the largest profits. It is ventured here that further analysis bearing upon this relationship will justify such an explanation of the large profits earned from 1900 to 1920 by the national banks in the Western States.

From the findings summarized above and from others well known to students of banking, the writer arrives at the following tentative conclusions. In the immediate future the course of national bank profits will be determined by the interplay of opposing tenden-

cies. These tendencies may be classified according to their favorable or unfavorable effect upon bank earnings. The unfavorable tendencies will be considered first.

The margin between interest received on earning assets and interest paid on deposits will decrease in the future. In a period, such as the present one, of large surplus accumulations from the profits of industry, borrowers will be quick to refund their obligations as interest rates seek lower levels. At the same time, holders of surpluses will be equally industrious in placing their funds where they will return the largest yield. Competitive pressure will thus operate to hasten the diminution of interest receipts and to retard the decrease in interest payments. It should be mentioned here that a considerable part of the costs of the manifold free services, so characteristic of present-day banking, is assignable to this competition for deposits. Since many of these services are provided for customers in lieu of paying higher rates of interest on deposit balances, the cost of the same should be considered also in this connection.

Furthermore, it is important to note that the rate at which this margin decreases is accelerated by the fact that, in the absence of effective coöperation, competitive pressure to retain customers or to acquire new ones operates to force the banker to reduce the price charged for bank credit more quickly than he is able to reduce the cost of securing funds. As the banks increase the proportionate size of their security port-

folios with callable bonds, this disparity in the rate of adjustment to falling interest rates tends to increase. The tardiness with which banks have scaled down their charges for commercial accommodation to levels consistent with the yield of securities is generally conceded to be one of the reasons why private flotations have tended, in recent years, to displace commercial loans.

Operating to increase profits or to counteract the foregoing, are the following favorable tendencies:

It is reasonable to believe that income from sources other than interest receipts will continue to increase. Most important among these other earnings are the profits from the exercise of fiduciary powers and from the sale of securities. Profits derived from the former will multiply through the establishment of new and the expansion of already operating departments for trust business. It is to be expected also that the national banks will enjoy larger earnings in the immediate future from the underwriting and handling of securities. The trend of security prices is distinctly upward and the volume of business of this nature is growing. For the larger city banks in all parts of the country transactions in securities are being facilitated more and more by the operation of investment and security subsidiaries.

Harmonious with and a necessary resultant of the tendency toward combination, which has been characteristic of industry since the beginning of this century, is the similar tendency on the part of the banks in recent years. Large industrial corporations require for

their financial operations correspondingly large and resourceful banking institutions. From these consolidations the operating economies of large scale operations accrue. In addition to the familiar savings in overhead costs, notable among these economies are those which result from "captured" financial accommodation in cases where the integration of banking and industrial activities is accomplished. To be mentioned also in this connection is the widespread practice of well entrenched institutions to operate branch banks. While little is as yet definitely known of the exact nature of the economies realized therefrom, it is probable that they are similar to those developed in chain store merchandising. At any rate, the persistence of the practice affords reasonable evidence to support the conclusion that it is a profitable one.

Another factor which will probably work to hold up the rate of profits earned on invested capital is the tendency to increase the amount of business done on a given amount of capital. It will be remembered that in 1888 for every \$1.00 of capital and surplus, the banks loaned and invested approximately \$2.50. In 1926, loans and investments amounted to \$7.50 for every one dollar invested. In the same period the ratio to earning assets of expenses doubled while losses remained about the same and gross earnings slightly declined. The result was that net profits, thus expressed, fell from 3.33% to 1.28%. Because, however, of the increase in capital turnover, this narrowed profit margin was, when measured as a percentage of capital and

surplus, practically the same in 1926 as it was in 1888. If capital accumulations from industrial profits continue at the present rate, it is highly probable that a significant part of these surpluses will be used to increase bank deposits. With deposits enlarged in this manner, the banks will be in possession of the basis for a further expansion of credit. This expansion will tend, as it has in the past, to offset lower rates of net earnings derived from the sale of such credit.

In the present survey of the history of national banking, the trend of bank costs and the trend of the relation between the volume of bank credit and capital investment emerge as the two most important factors in profit determination. Any prediction as to the profits to be earned by the national banks as a whole in the future is made difficult and its practical usefulness impaired by their lack of homogeneity. Such predictions must of necessity be arrived at by a process of averaging the results of trends which affect individual banks or groups of banks in varying ways and degrees.

The larger banks in the vanguard of current developments will probably be able to maintain or increase present earnings. The smaller independently operated banks will be not only slower to adjust themselves to these new developments, but will be forced to compete either directly or with the branches of large progressive institutions equipped to give superior services at lower cost. As a consequence the profits of the smaller banks may be expected to average lower in the next few years. In the national banking system the business

done by these small institutions bulks sufficiently large to justify the conclusion that average net profits for all national banks in the United States will fluctuate downward from the present level in the immediate future.

APPENDIX

TABLE 1

Earning Assets, Capital and Surplus, Gross Earnings and Net Profits of the National Banks.

(In thousands of dollars)

Year.	Earning Assets.	Capital and Surplus.	Gross Earnings.	Net Profits.
1870.....	1,125,466	509,716	.....	55,811
1871.....	1,209,391	533,828	.....	54,558
1872.....	1,302,700	560,491	.....	58,076
1873.....	1,362,275	600,495	.....	65,048
1874.....	1,368,836	615,641	.....	54,473
1875.....	1,406,965	628,559	.....	57,936
1876.....	1,350,482	635,705	.....	43,638
1877.....	1,322,454	619,099	.....	34,867
1878.....	1,287,956	593,451	.....	32,641
1879.....	1,544,919	575,719	.....	31,552
1880.....	1,442,505	572,833	.....	45,186
1881.....	1,625,176	582,734	.....	53,623
1882.....	1,674,576	599,582	.....	53,322
1883.....	1,742,241	628,266	.....	54,007
1884.....	1,707,985	659,948	.....	52,363
1885.....	1,677,203	671,587	.....	43,819
1886.....	1,792,659	687,491	.....	55,166
1887.....	1,881,923	720,943	.....	64,507
1888.....	1,965,553	762,245	129,148	65,360
1889.....	2,084,912	791,116	135,324	69,618
1890.....	2,229,891	833,297	144,614	72,056
1891.....	2,258,753	887,875	151,335	75,764
1892.....	2,461,124	913,436	148,559	66,658
1893.....	2,365,097	931,260	151,695	68,751
1894.....	2,379,646	918,952	139,725	41,955

TABLE 1 (Continued)

Year.	Earning Assets.	Capital and Surplus.	Gross Earnings.	Net Profits.
1895.....	2,463,811	907,753	135,459	46,866
1896.....	2,435,462	900,930	142,444	49,742
1897.....	2,417,014	887,218	137,729	44,274
1898.....	2,718,675	860,100	143,394	50,033
1899.....	3,143,774	856,606	156,520	54,347
1900.....	3,398,063	860,705	193,649	87,277
1901.....	3,842,477	903,962	188,266	81,853
1902.....	4,166,790	976,276	221,278	106,582
1903.....	4,480,819	1,075,903	234,583	109,881
1904.....	4,726,372	1,152,135	249,412	112,937
1905.....	5,138,633	1,183,819	248,584	105,909
1906.....	5,490,254	1,241,943	279,312	127,526
1907.....	6,076,762	1,365,064	314,702	152,235
1908.....	6,188,391	1,442,782	332,454	131,335
1909.....	6,684,224	1,504,551	348,674	131,186
1910.....	7,042,119	1,593,617	402,665	154,168
1911.....	7,393,227	1,678,112	428,973	156,986
1912.....	7,815,185	1,735,730	450,043	149,057
1913.....	8,032,717	1,776,993	499,252	160,980
1914.....	8,344,957	1,778,095	515,624	149,270
1915.....	8,728,341	1,795,197	527,985	127,053
1916.....	10,180,922	1,798,029	590,642	157,544
1917.....	11,991,626	1,847,588	667,406	194,321
1918.....	13,815,355	1,915,065	797,890	212,322
1919.....	15,885,866	1,984,964	910,760	240,366
1920.....	17,009,000	2,206,430	1,109,116	282,083
1921.....	15,388,467	2,299,507	1,201,919	216,106
1922.....	15,987,777	2,356,427	1,067,268	183,670
1923.....	17,074,505	2,399,391	1,049,408	203,488
1924.....	17,256,885	2,414,589	1,074,559	195,706
1925.....	18,581,094	2,488,338	1,124,097	223,935
1926.....	19,492,387	2,611,771	1,192,218	249,167
1927.....	.....	2,731,118	1,243,043	252,319

TABLE 2

Total Expenses and Gross Losses of the National Banks
(In thousands of dollars)

Year.	Expenses.	Gross Losses.
1888.....	45,801	12,486
1889.....	49,755	15,950
1890.....	51,286	21,292
1891.....	55,935	20,535
1892.....	52,622	23,219
1893.....	60,399	22,035
1894.....	59,623	33,087
1895.....	59,990	28,602
1896.....	61,606	31,695
1897.....	61,153	32,302
1898.....	62,122	31,179
1899.....	62,493	33,675
1900.....	72,714	33,659
1901.....	77,667	22,745
1902.....	85,235	29,462
1903.....	93,122	31,520
1904.....	103,050	33,425
1905.....	112,205	30,470
1906.....	120,448	31,337
1907*.....	131,544	30,622
1908.....	150,551	50,562
1909.....	177,035	40,454
1910.....	209,785	32,714
1911.....	232,062	39,926
1912.....	258,731	42,256
1913.....	284,516	53,756
1914.....	301,425	64,330
1915.....	322,451	72,422
1916.....	350,903	62,196
1917.....	410,753	62,332
1918.....	510,185	91,420
1919.....	610,780	80,680

TABLE 2 (Continued)

Year.	Expenses.	Gross Losses.
1920.....	736,390	114,555
1921.....	829,906	179,885
1922.....	732,990	192,390
1923.....	736,582	160,438
1924.....	766,044	147,304
1925.....	798,714	141,134
1926.....	841,666	145,390

*Data for the ten months from September 1, 1906, to July 1, 1907. Prior to 1907 the fiscal year ended on August 31; thereafter on June 30.

TABLE 3

Ratios of Gross Earnings, Expenses, Net Profits and Losses to Capital and Surplus of the National Banks.

Year.	Gross Earnings. %	Expenses. %	Net Profits. %	Gross Losses. %
1888.....	16.94	5.95	8.57	2.42
1889.....	17.09	6.27	8.80	2.02
1890.....	17.35	4.16	8.64	2.55
1891.....	17.04	6.20	8.53	2.31
1892.....	16.26	6.43	7.29	2.54
1893.....	16.28	6.54	7.38	2.36
1894.....	15.20	6.50	4.56	4.14
1895.....	14.92	6.82	5.16	2.94
1896.....	15.81	6.78	5.52	3.51
1897.....	15.52	6.99	4.99	3.64
1898.....	16.67	7.23	5.82	3.62
1899.....	18.27	8.00	6.34	3.93
1900.....	22.50	8.45	10.14	3.91
1901.....	20.83	8.61	9.05	3.17
1902.....	22.66	8.73	10.92	3.01
1903.....	21.80	8.66	10.21	2.93
1904.....	21.65	8.95	9.80	2.90

TABLE 3 (Continued)

Year.	Gross Earnings. %	Expenses. %	Net Profits. %	Gross Losses. %
1905.....	21.00	9.48	8.95	2.57
1906.....	22.48	9.69	10.27	2.52
1907.....	23.05	9.64	11.15	2.26
1908.....	23.04	10.44	9.10	3.50
1909.....	23.17	11.77	8.72	2.68
1910.....	25.26	13.16	9.67	2.43
1911.....	25.56	13.83	9.35	2.38
1912.....	25.92	14.90	8.59	2.43
1913.....	28.09	16.01	9.06	3.02
1914.....	28.99	16.95	8.39	3.65
1915.....	29.41	17.96	7.08	4.37
1916.....	32.84	20.62	8.76	3.46
1917.....	36.12	22.23	10.52	3.37
1918.....	41.66	26.64	11.09	4.77
1919.....	46.22	30.77	12.10	4.06
1920.....	50.28	33.38	12.79	5.19
1921.....	52.27	36.08	9.40	7.82
1922.....	45.29	31.11	7.79	8.16
1923.....	43.44	30.70	8.48	6.70
1924.....	44.50	31.72	8.11	6.10
1925.....	45.18	32.10	9.00	5.67
1926.....	45.65	32.22	9.54	5.56

TABLE 4

Ratios of Gross Earnings, Expenses, Net Profits and Gross Losses to Earning Assets of the National Banks.

Year.	Gross Earnings. %	Expenses. %	Net Profits. %	Gross Losses. %
1888.....	6.57	2.30	3.33	.94
1889.....	6.49	2.39	3.34	.77
1890.....	6.49	2.30	3.23	.95
1891.....	6.70	2.44	3.35	.91
1892.....	6.04	2.38	2.71	.94
1893.....	6.41	2.58	2.91	.93
1894.....	5.87	2.51	1.76	1.60

TABLE 4 (Continued)

Year.	Gross Earnings. %	Expenses. %	Net Profits. %	Gross Losses. %
1895.....	5.50	2.43	1.90	1.17
1896.....	5.85	2.50	2.04	1.30
1897.....	5.70	2.53	1.83	1.34
1898.....	5.27	2.29	1.84	1.15
1899.....	4.98	2.18	1.73	1.07
1900.....	5.70	2.14	2.57	.99
1901.....	4.90	2.02	2.13	.75
1902.....	5.31	2.05	2.56	.71
1903.....	5.24	2.08	2.45	.70
1904.....	5.28	2.18	2.39	.71
1905.....	4.84	2.19	2.06	.59
1906.....	5.09	2.19	2.32	.57
1907.....	5.18	2.16	2.51	.51
1908.....	5.37	2.43	2.12	.82
1909.....	5.22	2.65	1.96	.61
1910.....	5.72	2.98	2.19	.55
1911.....	5.80	3.14	2.12	.54
1912.....	5.76	3.31	1.91	.54
1913.....	6.22	3.54	2.00	.67
1914.....	6.18	3.61	1.79	.78
1915.....	6.05	3.69	1.46	.90
1916.....	5.89	3.70	1.57	.62
1917.....	5.58	3.43	1.62	.52
1918.....	5.78	3.69	1.54	.66
1919.....	5.73	3.84	1.51	.51
1920.....	6.52	4.33	1.66	.67
1921.....	7.81	5.39	1.40	1.17
1922.....	6.68	4.58	1.15	1.20
1923.....	6.15	4.31	1.19	.94
1924.....	6.23	4.44	1.13	.85
1925.....	6.05	4.30	1.20	.76
1926.....	6.12	4.32	1.28	.75

TABLE 5

Ratios of Net Profits, Losses, Net Profits Before Losses, and Expenses to Gross Earnings of the National Banks.

Year.	Net	Gross	Net Profits	Expenses.
	Profits. %	Losses. %	Before Losses. %	
1888.....	49.60	14.32	63.92	36.08
1889.....	51.44	11.79	63.23	36.77
1890.....	49.82	14.72	64.54	35.45
1891.....	50.06	13.57	63.63	36.37
1892.....	44.86	15.63	50.49	39.50
1893.....	45.32	14.53	59.85	40.15
1894.....	30.02	27.26	57.28	42.72
1895.....	34.59	21.11	55.70	44.29
1896.....	34.92	22.25	57.17	42.83
1897.....	32.14	23.45	55.59	44.40
1898.....	34.89	21.74	56.63	43.36
1899.....	34.72	21.51	56.23	43.76
1900.....	45.07	17.38	62.45	37.55
1901.....	43.48	15.27	58.75	41.25
1902.....	48.17	13.31	61.48	38.52
1903.....	46.84	13.46	60.30	39.70
1904.....	45.28	13.40	58.68	41.32
1905.....	42.60	12.26	54.86	45.14
1906.....	45.66	11.22	56.88	43.12
1907.....	48.37	9.83	58.20	41.80
1908.....	39.50	15.21	54.71	45.28
1909.....	37.62	11.60	49.22	51.77
1910.....	38.29	9.61	47.90	52.10
1911.....	36.59	9.31	45.90	54.13
1912.....	33.12	9.39	42.51	57.49
1913.....	32.24	10.77	43.01	56.99
1914.....	28.95	12.59	41.54	58.46
1915.....	24.06	14.86	38.92	61.08
1916.....	26.67	10.53	37.20	62.80
1917.....	29.11	9.34	38.45	61.55
1918.....	26.61	11.47	38.08	63.94
1919.....	26.39	8.86	35.25	67.06

TABLE 5 (Continued)

Year.	Net Profits. %	Gross Losses. %	Net Profits Before Losses. Expenses.	
			Losses. %	%
1920.....	25.43	10.33	35.76	66.40
1921.....	17.98	14.97	32.95	69.04
1922.....	17.21	18.03	35.24	68.70
1923.....	19.39	15.29	34.68	70.22
1924.....	18.21	13.70	31.91	71.26
1925.....	19.92	12.55	32.47	71.06
1926.....	20.90	12.20	33.10	70.61

TABLE 6

Gross Earnings, Total Expenses, Losses and Net Earnings of
Kansas State and Private Banks and Trust Companies.

(In thousands of dollars)

Year.	Gross Earnings.	Total Expenses.	Losses.	Net Earnings.
1897.....	2,182	1,139	663	380
1898.....	2,338	1,176	658	505
1899.....	2,511	1,319	260	933
1900.....	2,732	1,348	203	1,181
1901.....	3,112	1,501	204	1,406
1902.....	3,433	1,617	306	1,509
1903.....	3,867	1,930	217	1,721
1904.....	4,172	2,020	187	1,965
1905.....	4,644	2,442	319	1,882
1906.....	5,042	2,603	232	2,207
1907.....	5,597	2,982	371	2,244
1908.....	6,217	3,241	472	2,504
1909.....	7,542	4,237	361	2,944
1910.....	7,856	4,309	417	3,130
1911.....	7,806	4,605	322	2,879
1912.....	8,551	5,027	399	3,125
1913.....	9,220	5,445	642	3,132
1914.....	9,209	5,836	480	2,893

TABLE 6 (Continued)

Year.	Gross Earnings.	Total Expenses.	Losses.	Net Earnings.
1915.....	10,464	6,528	493	3,443
1916.....	12,184	7,344	635	4,204
1917.....	14,332	9,112	850	4,370
1918.....	16,872	11,421	808	4,643
1919.....	20,350	13,990	937	5,423
1920.....	23,265	16,773	1,437	5,054
1921.....	22,423	17,346	2,094	2,984
1922.....	20,616	15,851	2,942	1,823
1923.....	19,518	15,041	2,847	1,629
1924.....	19,210	15,312	2,262	1,636
1925.....	19,316	15,122	2,519	1,676

TABLE 7

Earning Assets and Ratios of Gross Earnings, Total Expenses, Losses and Net Earnings to Earning Assets of Kansas State and Private Banks and Trust Companies.

Year	Earning* Assets. \$	Gross Earnings. %	Total Expenses. %	Losses. %	Net Earnings. %
1897.....	17,112	12.75	6.66	3.87	2.22
1898.....	18,893	12.37	6.22	3.48	2.67
1899.....	20,739	12.11	6.36	1.25	4.50
1900.....	23,108	11.82	5.83	.88	5.11
1901.....	27,124	11.47	5.53	.75	5.18
1902.....	32,462	10.58	4.98	.94	4.66
1903.....	36,913	10.48	5.23	.59	4.66
1904.....	40,022	10.42	5.05	.47	4.90
1905.....	45,441	10.22	5.37	.70	4.14
1906.....	52,407	9.62	4.97	.44	4.21
1907.....	61,399	9.12	4.86	.60	3.66
1908.....	62,331	9.97	5.20	.76	4.01
1909.....	77,768	9.70	5.45	.46	3.79

TABLE 7 (Continued)

Year	Earning* Assets. \$	Gross Earnings. %	Total Expenses. %	Losses. %	Net Earnings. %
1910.....	84,395	9.31	5.11	.49	3.71
1911.....	84,798	9.21	5.43	.38	3.40
1912.....	92,308	9.26	5.45	.43	3.38
1913.....	99,319	9.28	5.48	.65	4.15
1914.....	102,130	9.02	5.71	.47	2.84
1915.....	117,692	8.89	5.55	.42	2.92
1916.....	134,419	9.06	5.46	.47	3.13
1917.....	168,592	8.50	5.40	.50	2.59
1918.....	208,094	8.11	5.49	.39	2.23
1919.....	254,003	8.01	5.51	.37	2.14
1920.....	285,637	8.14	5.87	.50	1.77
1921.....	260,108	8.62	6.67	.80	1.15
1922.....	243,901	8.45	6.50	1.20	.75
1923.....	236,612	8.25	6.36	1.20	.69
1924.....	219,207	8.54	6.99	1.03	.52
1925.....	224,959	8.59	6.72	1.12	.75

* Earning Assets in thousands of dollars.

TABLE 8

Ratios of Interest on Deposits, Officers' Salaries and Clerk Hire, and All Other Expenses to Earning Assets of Kansas State and Private Banks and Trust Companies.

	Interest on Deposits %	Salaries and Wages %	All Other Expenses %
1897.....	1.10	3.06	2.50
1898.....	1.11	2.72	2.39
1899.....	1.03	2.78	2.55
1900.....	.90	2.68	2.25
1901.....	.78	2.85	2.21
1902.....	.76	2.37	1.85
1903.....	.76	2.33	2.14
1904.....	.90	2.34	1.81

TABLE 8 (Continued)

	Interest on Deposits %	Salaries and Wages %	All Other Expenses %
1905.....	.91	2.31	2.15
1906.....	.96	2.25	1.76
1907.....	.98	2.16	1.72
1908.....	1.14	2.34	1.72
1909.....	1.02	2.13	2.30
1910.....	1.08	2.21	1.82
1911.....	1.19	2.36	1.88
1912.....	1.34	2.31	1.80
1913.....	1.47	2.27	1.74
1914.....	1.59	2.30	1.82
1915.....	1.57	2.15	1.83
1916.....	1.65	2.04	1.77
1917.....	1.89	1.85	1.67
1918.....	1.81	1.81	1.87
1919.....	1.69	1.80	2.01
1920.....	1.73	1.99	2.15
1921.....	1.85	2.29	2.52
1922.....	1.93	2.32	2.25
1923.....	1.88	2.32	2.16
1924.....	2.06	2.54	2.39
1925.....	2.06	2.38	2.29

TABLE 9

Ratios of Interest on Deposits, Salaries and Wages, All Other Expenses and Gross Losses to Earning Assets of the National Banks.

Year	Interest on Deposits %	Salaries and Wages %	All Other Expenses %	Gross Losses %
1918.....	1.76	.83	1.10	.66
1919.....	1.64	.88	1.32	.51
1920.....	1.69	1.03	1.61	.67

TABLE 9 (Continued)

Year	Interest on Deposits %	Salaries and Wages %	All Other Expenses %	Gross Losses %
1921.....	1.90	1.32	2.17	1.17
1922.....	1.84	1.24	1.50	1.20
1923.....	1.87	1.18	1.26	.94
1924.....	1.96	1.22	1.26	.85
1925.....	2.01	1.17	1.12	.76
1926.....	1.99	1.18	1.15	.75

TABLE 10

Bank Profits and Agricultural Crop Values for the
State of Kansas.

(In thousands of dollars)

Year.	Bank Profits.	Crop Values.
1897.....	945	136,335
1898.....	1,246	151,924
1899.....	1,780	169,848
1900.....	1,983	187,796
1901.....	2,485	195,255
1902.....	2,603	216,002
1903.....	3,082	223,984
1904.....	3,435	208,406
1905.....	3,452	238,836
1906.....	3,765	246,905
1907.....	4,429	266,398
1908.....	4,246	277,734
1909.....	5,150	307,538
1910.....	5,562	304,914
1911.....	4,940	282,927
1912.....	5,038	324,989
1913.....	5,126	241,470
1914.....	4,578	376,298

TABLE 10 (Continued)

Year.	Bank Profits.	Crop Values.
1915.....	5,467	342,843
1916.....	6,338	371,188
1917.....	6,920	507,484
1918.....	7,119	592,017
1919.....	8,143	746,619
1920.....	8,331	699,170
1921.....	5,200	351,121
1922.....	3,449	357,257
1923.....	2,462	384,728
1924.....	2,232	501,630
1925.....	2,691	418,749

TABLE 11

Ratios of Net Profits to Capital and Surplus of the National
Banks by Geographical Areas.
Source, Reports of Comptroller.

Year.	New England. %	Eastern. %	Southern. %	Middle Western. %	Western. %	Pacific. %
1870.....	11.05	10.16	14.45	11.33	15.36	22.22
1871.....	10.16	9.43	11.98	11.96	13.69	11.48
1872.....	10.00	9.56	12.19	12.12	14.53	21.94
1873.....	10.53	9.84	12.37	12.77	19.06	17.22
1874.....	9.64	9.01	9.82	10.65	14.38	7.68
1875.....	8.70	8.16	10.04	11.31	13.92	18.03
1876.....	6.48	5.05	9.68	9.87	11.29	10.87
1877.....	4.74	5.39	7.30	7.09	8.85	10.01
1878.....	4.28	4.95	6.18	6.70	7.32	10.58
1879.....	4.15	5.84	5.42	6.88	9.61	10.20
1880.....	6.41	8.59	7.58	8.94	15.03	11.03
1881.....	7.28	9.34	11.39	10.98	22.22	15.08
1882.....	6.76	8.64	10.33	11.67	11.49	7.64
1883.....	6.19	8.38	10.65	11.14	19.30	15.42
1884.....	5.65	7.38	11.46	9.61	17.98	16.08

TABLE 11 (Continued)

Year.	New England. %	Eastern. %	Southern. %	Middle Western. %	Western. %	Pacific. %
1885.....	4.39	6.22	8.63	7.88	13.42	13.07
1886.....	6.13	7.97	9.45	9.15	13.43	12.81
1887.....	6.46	9.33	9.58	10.13	13.95	12.82
1888.....	6.20	8.56	9.29	9.33	13.82	17.62
1889.....	6.60	8.94	9.89	9.46	11.44	15.42
1890.....	5.59	8.84	10.75	9.78	10.78	13.45
1891.....	6.47	8.50	9.47	9.85	9.03	12.60
1892.....	5.13	7.62	7.18	8.63	7.60	9.91
1893.....	5.71	8.03	6.96	7.87	7.73	8.76
1894.....	4.15	5.91	4.77	4.13	.92	1.81
1895.....	4.03	5.63	6.22	5.81	4.44	4.12
1896.....	4.95	6.35	6.90	5.16	2.30	3.66
1897.....	4.79	5.84	5.74	4.34	2.57	2.52
1898.....	4.20	6.52	6.85	5.84	5.98	5.83
1899.....	4.39	7.00	7.58	6.52	7.87	7.88
1900.....	6.85	11.85	10.90	10.02	9.31	11.68
1901.....	5.73	9.04	11.65	9.96	11.74	11.62
1902.....	5.73	12.42	11.65	10.70	17.14	13.30
1903.....	6.43	10.52	11.59	10.25	14.15	14.30
1904.....	5.96	10.32	11.25	9.60	12.85	12.95
1905.....	5.70	8.61	11.31	8.81	13.23	12.73
1906.....	7.63	10.06	11.72	9.72	14.42	13.68
1907.....	8.42	10.57	12.46	10.53	18.24	14.92
1908.....	7.87	8.36	9.79	9.09	13.84	11.82
1909.....	6.43	8.18	9.48	8.31	14.21	11.35
1910.....	8.67	9.05	10.13	8.89	15.54	12.25
1911.....	7.79	7.94	10.11	10.81	12.47	10.54
1912.....	7.01	8.18	9.62	8.19	11.95	9.38
1913.....	7.93	8.64	10.10	8.56	11.57	10.22
1914.....	6.50	7.80	9.55	8.79	10.72	8.22
1915.....	6.09	5.99	7.59	7.98	10.24	7.23
1916.....	8.13	9.15	8.31	8.30	11.89	7.49
1917.....	9.04	11.13	9.97	10.09	14.26	8.56
1918.....	9.62	11.12	10.95	11.29	14.49	9.25
1919.....	9.94	13.65	11.14	11.20	13.57	10.63

TABLE 11 (Continued)

Year.	New England. %	Eastern. %	Southern. %	Middle Western. %	Western. %	Pacific. %
1920.....	10.33	12.61	14.24	12.59	13.51	13.62
1921.....	8.38	9.60	8.12	11.29	7.14	8.86
1922.....	6.64	9.84	6.20	7.93	2.39	5.98
1923.....	7.86	11.58	7.34	6.75	2.23	6.05
1924.....	6.95	10.59	8.04	6.82	.19**	6.86
1925.....	7.61	11.76	7.90	7.23	2.69	7.68
1926.....	9.38	10.91	9.47	8.50	4.41	8.39

** Deficit.

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